Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter

1AAD Activity Filter

Starts In FY

WBS No: 1AAD	Title: Decommissioning										
Activity ID: 1AD	Description: Set 1 - Attic/Chem Makeup F	Planning & Eng	gineering				Cost Risk	2 Schedule R	risk 2		
Line Item	Description	Quantity	Units BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1B10	Set 1 P&E	1.00 ead	ch HC	1.059	1.059	31.331	149.339	0	180.670	9.260	189.930
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	37.647	37.647	0	37.647
	Tot	al for Activity 1	IAD0001B10:		1.059	31.331	149.339	37.647	218.317	9.260	227.577

Line Item 1B10 - Set 1 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 59 hours, \$8,424 subcontracts, \$486 supplies

1st Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 102 hours, \$14,515 subcontracts, \$837 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

S	Cost Element		Skill		Department	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	768.16 Hours
Factor	s 845 Hours						
_		1		T		0.90907 CA AAD Ad	iustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	270.90 Hours
Factor	s 298 Hours						
		1		T		0.90907 CA AAD Ad	iustment Factor
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	20.00 Hours
Factor	s 22 Hours						
		1		T		0.90907 CA AAD Ad	iustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	8.143.44 Dollars
Factor	s 8958 Dollars						
			T	1		0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	116.049.00 Dollars
Factor	s 127657 Dollars						
				1		0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	2.602.66 Dollars
Factor	s 2863 Dollars						
				1		0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	21.001.31 Dollars
Factor	s 23102 Dollars						
				1		0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	1.542.69 Dollars
Factor	s 1697 Dollars						
						0.90907 CA AAD Ad	justment Factor

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item SYS - Contingency And Escalation

BOE

Resources Cost Element Skill Department	Curve	Quantity Units
CON CONTINGENCY 0000 NONE ZDEPT No Department	Linear	19.414.14 Dollars
Factors 19414.1 Dollars		
ESC ESCALATION 0000 NONE ZDEPT No Department	Linear	18.232.78 Dollars

Factors 18232.8 Dollars

ACTIVITY ID: TAD	Description: Set 1 - Attic/Criem Makeup 3	one Suppor	ι					Cost Kisk	2 Scheaule K	ask Z		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1B30	Set 1 Site Support	1.00	each	HC	4.136	4.136	90.176	560.398	0	650.574	26.004	676.578
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	124.553	124.553	0	124.553
	Tot	al for Activi	ity 1AD0001	B30:		4.136	90.176	560.398	124.553	775.127	26.004	801.131

Line Item 1B30 - Set 1 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 7,783 hrs, \$70,138 subcontracts, \$1,042,949 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 13,410 hrs, \$120,848 subcontracts, \$1,797,001 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Cost Element		Skill		Department	Curve	Ouantity Units
750 STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	991.79 Hours
Factors 1091 Hours						
			,	T.	0.90907 CA AAD Ad	liustment Factor
750 STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	2.666.30 Hours
Factors 2933 Hours						
			,	T	0.90907 CA AAD Ad	liustment Factor
750 STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	478.17 Hours
Factors 526 Hours						
					0.90907 CA AAD Ad	liustment Factor
A5C SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	35.311.87 Dollars
Factors 38844 Dollars						
					0.90907 CA AAD Ad	liustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	509.752.20 Dollars
Factors 560741 Dollars						
					0.90907 CA AAD Ad	liustment Factor
A5H SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	4.378.08 Dollars
Factors 4816 Dollars						
					0.90907 CA AAD Ad	liustment Factor

A5H

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Proiect WBS Filter Baseline Devl

1AAD Activity Filter

Starts In FY

Factors 4821 Dollars

E120 SAFETY ENGINEERS KA70S B371 Facility Disposition SUBCONTRACTED SRVS

Linear

4.382.62 Dollars

SUBCONTRACTED SRVS A5H

E130 OTHER ENGINEERS KA70S B371 Facility Disposition 0.90907 CA AAD Adjustment Factor 6.573.48 Dollars Linear

7231 Factors Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
(CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	58.997.54	Dollars
Fa	ictors	58997.5 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	65.555.49	Dollars

Factors 65555.5 Dollars

Activity ID: 1AD00011 10

Description: Set 1 - Attic/Chem Makeup - Dismantlement

Cost Risk

4 Schedule Risk

TOUTHER ID. ITE	Description Cot 1 / title Choth Markoup	Diomantioni	ioni				Cost Itisic	Benedine 1	0		
Line Item	Description	Quantity	Units BO	E Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Typ	e Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS100	Dismantlement - A5C only	1.00 e	ea HO	0	0	0	94.799	0	94.799	0	94.799
Building Trades	Building Trade Crew of 8 (227d x 4 crews)	908.00 d	dav EE	0	0	0	3.565.877	0	3.565.877	0	3.565.877
SYS	Contingency And Escalation	1.00 e	ea EE	0	0	0	0	724.647	724.647	0	724.647
	Tot	al for Activity	/ 1AD0001L10:		0	0	3.660.676	724.647	4.385.323	0	4.385.323

Line Item 1AQEDIS100 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 7,879.65 hrs, \$183,847.33 subcontracts, \$64,249.51 supplies

1st Unit Cost Adjustment factor - .942

Revised Unit Cost - 7,422.65 hrs, \$173,184 subcontracts, \$60,523 supplies

Basis for adjustment - Estimated efficiencies gained for availability of Size

Reduction Facility for half of FY01.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 12,789 hrs, \$298,396 subcontracts, \$104,281 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	C	urve	<i>Ouantity</i>	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition		near	94.798.6	1 Dollars

Factors 104281 Dollars

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (227d x 4 crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4WBS No: 1AAD **Rocky Flats Closure Project** Activity ID: 1AD0001L10 **Baseline Cost and Basis of Estimate** Proiect Baseline Devl WBS Filter 1AAD Activity Filter

Starts In FY

0.90907 CA AAD Adjustment Factor

pipefitters; 2-laborers; 1-RCT). Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup Breakdown of Cost Data:

Item - Building Trades Support

Units - 4 Crews @ 8 people per crew x 227 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	C	ost Element			Skill			Department	Curve	Quantity	Units
L	A5B CONSTRU	ICTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers	Linear	1.963.59	Dollars
F	actors 4	Pipe Fitters		9	hours a day		60	\$/hr			
_									0.90907 CA AAD Adi	ustment Factor	
	A5B CONSTRU	ICTION	L090	GENERA	L LABORER	KA70H	371 F	acility Disposition Steelworkers	Linear	981.79	Dollars
F	actors 2	Laborers		9	hours a day		60	\$/hr			
									0.90907 CA AAD Adi	ustment Factor	
	A5B CONSTRU	ICTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371	Facility Disposition	Linear	490.90	Dollars
F	actors 1	Foreman		9	hours a day		60	\$/hr			
									0.90907 CA AAD Adi	ustment Factor	
	A5B CONSTRU	ICTION	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA70H	371 F	acility Disposition Steelworkers	Linear	490 90	Dollars

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	362.710.80	Dollars
	Factors	362711 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	361.936.00	Dollars

Factors 361936 Dollars

ACTIVITY ID: TADE	Activity ID: 1AD0001L20 Description: Set 1 - AttiC/Chem Makeup - Decontamination Cost Risk 4 Schedule Risk 4											
Line Item	Description	Quantity U	Units BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
1L20	Set 1 Decontamination	1.00 each	h HC	141	141	4.122	108.951	0	113.073	1.435	114.508	
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	63.170	63.170	0	63.170	
	Tot	al for Activity 1A	AD0001L20:		141	4.122	108.951	63.170	176.243	1.435	177.678	

Line Item 1L20 - Set 1 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 225 hrs, \$68,116 subcontracts, \$1,440 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 388 hrs, \$117,364 subcontracts, \$2,481 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

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Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Baseline Devl 1AAD

Starts In FY

0.90907 CA AAD Adjustment Factor

2 C.L. L.L. D.L

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Cost Element	Skill	Department	Curve	Ouantity Uni
750 STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	37.27 Hours
Factors 41 hours				
			0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	89.09 Hours
Factors 98 hours				
			0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	T050 RADIATION CONTROL	TECHNOLIGI KA10H 371 Complex Steelworkers	Linear	14.55 Hour
Factors 16 hours				
			0.90907 CA AAD A	diustment Factor
A5B CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	85.692.46 Dolla
Factors 94264 dollars				
			0.90907 CA AAD A	diustment Factor
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	1.309.06 Dolla
Factors 1440 dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	21.484.02 Dolla
Factors 23633 dollars - Site Prep				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	465.44 Dolla

Line Item SYS - Contingency And Escalation

512

dollars

Factors

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
L	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	45.431.30	Dollars
<u>F</u>	Factors	45431.3 Dollars							
L	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	17.739.01	Dollars

Factors 17739.0 Dollars

Activity ID: TAD	Description: Set 1 - Attic/Chem Makeup -		Cost Risk 2 Schedule Risk 3									
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1L30	Set 1 Final Survey			1.00 each HC 150			3,486	10,972	0	14,458	1,213	15,671
SYS					0	0	0	0	8,467	8,467	0	8,467
	Tot	tal for Activity 1AD0001L30:			150	3,486	10,972	8,467	22,924	1,213	24,137	

Line Item 1L30 - Set 1 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

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Item Desc - Decommissioning Final Survey
Breakdown of Historical Data:
Item - Final Survey
Units - 1 lot
Unit Cost - 165 hrs, $11,112 subcontracts, $936 supplies
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - 284 hrs, $19,146 subcontracts, $1,613 supplies
Basis for adjustment - See Below:
1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.
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Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter Activity Filter

1AAD

Starts In FY

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	27.73	Hours

30.5 Hours **Factors**

				0.90907 CA AAD /	Adjustment Factor
750 STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H 371 Complex Stee	elworkers Linear	122.27 Hours

Factors 134.5 Hours

						0.90907 CA AAD Adii	ustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	852.71 Dollars

Dollars 938 Factors

0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 10.119.30 Dollars Linear

Factors 11131.5 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000 NONE 2		ZDEPT	No Department	Linear	6,038.98	Dollars
ي .	Factors	6038.98 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2,427.62	Dollars

2427.62 Dollars

Activity ID: 1AD0002B10

Description: Set 2 - Aqueous Proc Area Planning & Engineering

Cost Risk 2 Schedule Risk

Line Item	Description	Quantity Units		BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
2B10	Set 2 P&E	1.00 each		HC	3,404	3,404	100,697	479,813	0	580,510	36,994	617,504
SYS	Contingency And Escalation							0	97.456	97.456	0	97.456
	Tot	310:		3.404	100.697	479.813	97.456	677.966	36.994	714.960		

Line Item 2B10 - Set 2 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 1,945 hours, \$272,966 subcontracts, \$15,743 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,351 hrs, \$470,320 subcontracts, \$27,125 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

6/22/00 8:38:09 PM Page 6 of 135 OFFICIAL USE ONLY WBS No: 1AAD Proiect Baseline Devl Rocky Flats Closure Project Activity ID: 1AD0002B10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY Skill Ilmite Resources Cost Element Department Curve E130 OTHER ENGINEERS 750 STRAIGHT TIME BASE R100S RMRS Salaried Linear 2.468.12 Hours Factors 2715 Hours 0.90907 CA AAD Adjustment Factor STRAIGHT TIME BASE G010 ADMINISTRATIVE ASSISTANTS R100S RMRS Salaried Linear 871.80 Hours Factors 959 Hours 0.90907 CA AAD Adjustment Factor M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 750 STRAIGHT TIME BASE Linear 64.54 Hours **Factors** 71 Hours 0.90907 CA AAD Adjustment Factor SUPPLIES 0000 NONE KA70S B371 Facility Disposition 26.163.91 Dollars A5C Linear Factors 28781 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 372.856.40 Dollars Linear Factors 410152 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS E050 ENVIRONMENTAL ENGINEERS KA70S B371 Facility Disposition Linear 8.360.71 Dollars Factors 9197 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS KA70S B371 Facility Disposition Linear 67.474.73 Dollars Factors 74224 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS G010 ADMINISTRATIVE ASSISTANTS KA70S B371 Facility Disposition 4 957 15 Dollars Linear Factors 5453 Dollars 0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Units Department Curve **Ouantity** CON CONTINGENCY 0000 NONE ZDEPT No Department 61.549.80 Dollars Linear Factors 61549.8 Dollars ESC ESCALATION ZDEPT No Department 35.905.78 Dollars 0000 NONE Linear 35905.8 Dollars Factors Activity ID: 1AD0002B30 Description: Set 2 - Aqueous Proc Areas Site Support Cost Risk 1 Schedule Risk Line Item **Ouantity** Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Description

			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		1
2B30	Set 2 Site Support	1.00 each	НС	13.291	13.291	289.764	1.800.512	0	2.090.276	104.708	2.194.984
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	369.294	369.294	0	369.294
		Total for Activity 1AD000	2B30:		13.291	289.764	1.800.512	369.294	2.459.570	104.708	2.564.278

Line Item 2B30 - Set 2 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services Units - 1 lot Unit Cost - ???? hrs. \$???? subcontracts. \$???? supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - ???? hrs, \$???? subcontracts, \$???? supplies

- Basis for adjustment See Below:
- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Ouantity Units
L	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	3.187.20 Hours
	Factors	3506 Hours						
г		T				1	0.90907 CA AAD Adit	stment Factor
L	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	8.566.16 Hours
	Factors	9423 Hours						
г		П	1			T	0.90907 CA AAD Adit	stment Factor
L	750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	1.537.24 Hours
	Factors	1691 Hours						
Г		1			1		0.90907 CA AAD Adit	
Į	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	113.454.50 Dollars
	Factors	124803 Dollars						
Г							0.90907 CA AAD Adit	
L	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.637.793.00 Dollars
	Factors	1801616 Dollars						
г					1		0.90907 CA AAD Adju	
Į	A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	14,066.02 Dollars
	Factors	15473 Dollars						
г		1	1			T	0.90907 CA AAD Adju	
L	A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	14,079.66 Dollars
	Factors	15488 Dollars						
г		T				1	0.90907 CA AAD Adit	
Į	A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	21,118.58 Dollars
	Factors	23231 Dollars						

0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	238.395.00	Dollars
	Factors	238395 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	130.899.20	Dollars
	Factors	130899 Dollars							

Activity ID: 1AI	Description: Set 2 - Aqueous Proc Areas	- Dismantle	ement					Cost Risk	5 Schedule R	risk 5		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS110	Dismantlement - A5C only	1.00	ea	HC	0	0	0	361.468	0	361.468	0	361.468
1AQEDIS115	Dismantlement - A5C only	1.00	ea	HC	0	0	0	1.235.063	0	1.235.063	0	1.235.063
1AQEDIS117	Dismantlement - A5C only	1.00	ea	HC	0	0	0	513.118	0	513.118	0	513.118
Building Trades	Building Trade Crew of 8 (227d x 1crew)	227.00	dav	EE	0	0	0 891.4	891.469	0	0 891.469	0	891.469
Steekworkers					104	271.221	5.748.613	0	0	5.748.613	2.025.265	7.773.878
SYS	1.00	2.600.00 dav 1.00 ea		0	0	0	0	1.929.815	1.929.815	0	1.929.815	
	Tot	al for Activi	ty 1AD0002L	_10:		271.221	5.748.613	3.001.118	1.929.815	10.679.546	2.025.265	12.704.811

Line Item 1AQEDIS110 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

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Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY *

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data: Item - Dismantlement Units - 1 lot Unit Cost - 29,219 hrs, \$681,738 subcontracts, \$238,248 supplies 1st Unit Cost Adjustment factor - .942 Revised Unit Cost - 27,524 hrs, \$642,197 subcontracts, \$224,430 supplies Basis for adjustment - Estimated efficiencies gained for availability of Size Reduction Facility for half of FY01. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 47,425 hrs, \$1,144,127 subcontracts, \$392,493 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element Skill				Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	361.468.00	Dollars

Factors 397625 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQEDIS115 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data: Item - Dismantlement Units - 1 lot Unit Cost - 162,487 hrs, \$3,920,024 subcontracts, \$1,344,766 supplies Unit Cost Adjustment factor - .884 1st Revised Unit Cost - 143,638 hrs, \$3,465,301 subcontracts, \$1,188,703 supplies Basis for adjustment - Estimated efficiencies gained for availability of Size Reduction Facility for all of FY02. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 247,489 hrs, \$5,970,714 subcontracts, \$2,048,256 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element		Skill			Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.235.063.00	Dollars

Factors 1358602 Dollars

0.90907 CA AAD Adjustment Factor

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item 1AQEDIS117 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 59,556 hrs, \$1,436,812 subcontracts, \$492,899 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 47,681 hrs, \$1,150,312 subcontracts, \$394,615 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 82,154 hrs, \$1,981,988 subcontracts, \$679,922 supplies Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	513.117.70	Dollars

564443 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (227d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 8 people per crew x 227 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

s		Cost Element			Skill			Department		Curve	Quantity	Units
A5B	CONSTR	UCTION	C080	PLUMBER	RS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers	E	Back Loaded	1.963.59	Dollars
Factors	s 4	Pipe Fitters		9	hours a day		60	\$/hr				
									0.90	0907 CA AAD Adi	ustment Factor	
A5B	CONSTR	UCTION	L090	GENERA	LABORER	KA70H	371 F	acility Disposition Steelworkers	E	Back Loaded	981.79	Dollars
Factors	s 2	Laborers		9	hours a day		60	\$/hr				
									0.90	0907 CA AAD Adi	ustment Factor	
A5B	CONSTR	UCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371	Facility Disposition	E	Back Loaded	490.90	Dollars
Factors	s 1	Foreman		9	hours a day		60	\$/hr				
									0.90	0907 CA AAD Adi	ustment Factor	
A5B	CONSTR	UCTION	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA70H	371 F	acility Disposition Steelworkers	E	Back Loaded	490.90	Dollars
Factors	s 1	RCT		9	hours a day		60	\$/hr				
									0.90	0907 CA AAD Adi	ustment Factor	

WBS No: 1AAD Rocky Flats Closure Project Activity ID: 1AD0002L10 **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item Steekworkers - Steelworker Crew of 15 (650d x 4crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 4 Crews @ 15 people per crew x 650 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill		Department	Curve	Ouantity	Units
	750	STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	62.59	Hours

D&D Workers Factors a 7 65 hours a day

0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 6.95 Hours Linear 7.65 **Factors** Foreman hours a day

						U.9U9U7 CA AAD AUI	usimeni racioi	
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	34.77 H	lours
	5 DOT		7.05					

Factors RCTs 7.65 hours a day

0.90907 CA AAD Adjustment Factor

0.00007 CA AAD Adjustment Feeter

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill	Department	Curve	Ouantity Units
	CON	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	1.243.011.00 Dollars
	Factors	1243011 Dollars				
	ESC	ESCALATION	0000 NONE	ZDEPT No Department	Linear	686.804.40 Dollars

Factors 686804 Dollars

Ctivity ID:	1 V D00031 30	Decomintions	Sat 2	Varioons	Droc A	roac [Docontominati	on

Activity ID: 1AD	O002L20 Description: Set 2 - Aqueous Proc Areas	- Decontamination	on				Cost Risk	4 Schedule R			
Line Item	Description	Quantity U	Inits BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
2L20	Set 2 Decontamination	1.00 each	HC HC	2.613	2.613	67.367	3.595.834	0	3.663.201	18.997	3.682.198
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	538.330	538.330	0	538.330
	To	tal for Activity 1AI	D0002L20:		2.613	67.367	3.595.834	538.330	4.201.531	18.997	4.220.528

Line Item 2L20 - Set 2 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 7,281 hrs, \$2,206,956 subcontracts, \$46,646 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 12,545 hrs, \$3,802,585 subcontracts, \$80,371 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

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Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

t Baseline Devl ilter 1AAD

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the

0.90907 CA AAD Adjustment Factor

2 Schedule Risk

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Basis of Estimates were based upon Management Directive to accept additional risk.

Resources

S Cost Element		Skill		Department	Curve	Ouantity Units
750 STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	1.202.70 Hours
Factors 1323 hours						
					0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	979.07 Hours
Factors 1077 hours						
					0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	430.90 Hours
Factors 474 hours						
		T			0.90907 CA AAD A	diustment Factor
A5B CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	2.776.409.00 Dollars
Factors 3054124 dollars						
		T			0.90907 CA AAD A	diustment Factor
A5C SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	73.062.77 Dollars
Factors 80371 dollars						
		_			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	15.061.45 Dollars
Factors 16568 dollars						
					0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	731.300.40 Dollars
Factors 804450 dollars - Site Prep						

Line Item SYS - Contingency And Escalation

BOE

Resources

es	S Cost Element Skill			Department	Curve	Quantity	Units		
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	184,779.10	Dollars
ال ا	Factors	184779 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	353.550.90	Dollars

Factors 353551 Dollars

Activity ID: 1AD0002L30 Description: Set 2 - Aqueous Proc Areas - Final Survey

,,	Description: Cot 2 / Iqueous 1 / Co / II out		Cost Hist	= beneame n								
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
2L30	Set 2 Final Survey	1.00	each	НС	2.079	2.079	55.293	355.490	0	410.784	15.745	426.529
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	76.999	76.999	0	76.999
	To	al for Activi	ity 1AD0002	L30:		2.079	55.293	355.490	76.999	487.782	15.745	503.527

Line Item 2L30 - Set 2 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey

Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 5,335 hrs, \$360,028 subcontracts, \$30,340 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 9,193 hrs, \$620,328 subcontracts, \$52,276 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

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Cost Rick

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY *

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	903.61	Hours
	_								

Factors 994 Hours

						0.90907 CA AAD Adi	ustment Factor
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	1.174.97 Hours

Factors 1292.5 Hours

			0.90907 CA AAD AGI	ustment Factor
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	27.629.33 Dollars
Frates 20202 Dellara				

Factors 30393 Dollars

						0.90907 CA AAD Adii	ustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	327.861.10 Dollars

Factors 360656 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

Factors

BOE

Resources

es		Cost Element	Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	34.989.71	Dollars
	Factors	34989.7 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	42.009.02	Dollars

Activity ID: 1AD0003B10 Description: Set 3 - Process Areas Planning & Engineering

Cost Risk	2	Schedule R	isk	2

Line Item	Description	Quantity Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
3B10	Set 3 P&E	1.00 each	HC	2.014	2.014	59.592	283.959	0	343.551	21.365	364.916
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	61.554	61.554	0	61.554
	Tot	al for Activity 1AD000	3B10·		2 014	59 592	283 959	61.554	405 105	21.365	426 470

Line Item 3B10 - Set 3 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

42009.0 Dollars

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 2,005 hours, \$281,391 subcontracts, \$16,229 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,455 hrs, \$484,837 subcontracts, \$27,963 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

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Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Baseline Devl 1ΔΔD

uer	IAAD
Filter	*

	Cost Element	Skill	D an auton aut	Curve	Quantity Units			
sources	750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	Pepartment R100S RMRS Salaried	Linear	1.460.87 Hours			
	Factors 1607 Hours	1 E130 IOTHER ENGINEERS	R 1003 IRIVIRS Salalleu	Lilleal	1.400.071H0uIS			
	1 4010/15			0.90907 CA AAD Ad	diustment Factor			
	750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	515.44 Hours			
	Factors 567 Hours			0.90907 CA AAD Ad	liustment Factor			
	750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GRO	OUP R100S RMRS Salaried	Linear	38.18 Hours			
	Factors 42 Hours			0.90907 CA AAD Ad	diustment Factor			
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	15.484.17 Dollars			
	Factors 17033 Dollars							
				0.90907 CA AAD Ad				
	A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	220.660.10 Dollars			
	Factors 242732 Dollars			0.90907 CA AAD Ad				
F	A5H SUBCONTRACTED SRVS	E050 ENVIRONMENTAL ENGINEERS	KA70S B371 Facility Disposition	Linear	4.948.06 Dollars			
	Factors 5443 Dollars							
	A5H SUBCONTRACTED SRVS	E130 OTHER ENGINEERS	KA70S B371 Facility Disposition	Linear	39.932.67 Dollars			
	Factors 43927 Dollars			0.00007 . 0.4 AAD A.	U			
	A5H SUBCONTRACTED SRVS	G010 ADMINISTRATIVE ASSISTANTS	S KA70S B371 Facility Disposition	0.90907 CA AAD Ad Linear	2.933.57 Dollars			
	Factors 3227 Dollars	GOTO IADIVINISTRATIVE ASSISTANTS	NATUS BST11 aclitiv Disposition	Lilleal	2.933.37 Dollars			
	'S - Contingency And Escalation			0.90907 CA AAD Ac	diustment Factor			
)E	S Cost Element	Skill	The state of the s	Curve	Ouantity Units			
-		Distri-	Department					
-	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	39.297.67 Dollars			
	CON CONTINGENCY Factors 39297.7 Dollars		ZDEPT No Department					
	CON CONTINGENCY Factors 39297.7 Dollars ESC ESCALATION	0000 NONE		Linear	39.297.67IDollars 22.256.55IDollars			
OE esources vity ID:	CON CONTINGENCY Factors 39297.7 Dollars ESC ESCALATION Factors 22256.6 Dollars		ZDEPT No Department	Linear				
esources	CON CONTINGENCY Factors 39297.7 Dollars ESC ESCALATION Factors 22256.6 Dollars 1AD0003B30 Description: Set	3 - Process Areas Site Support Quantity Units	ZDEPT No Department ZDEPT No Department Cost Ris BOE Labor Labor Hours Labor Cost Materia	Linear sk 1 Schedule Risk sls/Sub Contingency Total I	22.256.55 Dollars			
esources	CON CONTINGENCY Factors 39297.7 Dollars ESC ESCALATION Factors 22256.6 Dollars 1AD0003B30 Description: Set	3 - Process Areas Site Support Quantity Units	ZDEPT No Department ZDEPT No Department Cost Ris BOE Labor Labor Hours Labor Cost Materia Type Hours/Unit Total Total Co	Linear sk 1 Schedule Risk sls/Sub Contingency Total a st & Escalation Co	22.256.55 Dollars 1 Prime Burden Cost Total			
esources vity ID: Line Item	CON CONTINGENCY Factors 39297.7 Dollars ESC ESCALATION Factors 22256.6 Dollars 1AD0003B30 Description: Set Description	3 - Process Areas Site Support Quantity Units	ZDEPT No Department ZDEPT No Department Cost Ris BOE Labor Labor Hours Labor Cost Materia Type Hours/Unit Total Total Co	Linear	22.256.55 Dollars 1 Prime Burden Cost Totost			

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services Units - 1 lot Unit Cost - ???? hrs, \$???? subcontracts, \$???? supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - ???? hrs, \$???? subcontracts, \$???? supplies Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%

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Proiect **Rocky Flats Closure Project** WBS Filter **Baseline Cost and Basis of Estimate** Activity Filter

3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

1AD0003B30

i	Cost Element		Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	1.886.32	Hours
Factors	2075 Hours							
						0.90907 CA AAD A		ı
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	5,069.88	Hours
Factors	5577 Hours							
			1		<u> </u>	0.90907 CA AAD A		1
750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	909.98	Hours
Factors	1001 Hours					0.90907 CA AAD A	diustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	67,143.82	Dollars
Factors	73860 Dollars							
						0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	969.262.80	Dollars
Factors	1066215 Dollars							
						0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	8.324.34	Dollars
Factors	9157 Dollars							
						0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	8.332.52	Dollars
Factors	9166 Dollars							
						0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	12.498.79	Dollars
Factors	13749 Dollars							

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	153.131.60	Dollars
_	Factors	153132 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	79.543.16	Dollars

79543.2 Dollars Factors Activity ID: 1AD0003L00

Activity ID: 1AD	Description: B371 Disposition of Crates (I	tm3305&3420)as Waste						Cost Risk 2 Schedule Risk 2				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
3L00	Disposition of Crates	1.72	each	HC	16.818	28.977	775.629	580.891	0	1.356.519	288.852	1.645.372
SYS Contingency And Escalation		1.00	ea	EE			0	0	249.153	249.153	0	249.153

Line Item 3L00 - Disposition of Crates

BOE

Historical Data Source - Costs associated with the removal of gloveboxes from like areas in Building 779 and D&D expertise. Item Desc - Prepare process plans, prepare and remove gloveboxes and equipment, size reduce and package for shipment.

Total for Activity 1AD0003L00:

Breakdown of Historical Data: Item Unit Unit Cost K-H Support Lot 2,500 Hrs RMRS Support Lot 2,000 Hrs 775.629

Baseline Devl

0.90907 CA AAD Adjustment Factor

Starts In FY

1AAD

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY *

SSOC Support Equipment & Supplies Lot Unit Cost Adjustment factor - N/A Revised Unit Cost - As stated above Basis for adjustment - N/A

16,000 Hrs \$266,935 Dollars

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es		С	ost Element		Skill		Department	Curve	Quantity	Units
Į	750	STRAIGHT	TTIME BASE	C010	CARPENTERS	KA70H	371 Facility Disposition Steelworkers	Linear	454.53	Hours
	Factors	500	hours							
ſ		07041011	- TU (- D) O -	0.100	Don 0/4/4 ED TD 4 DE 0	144 = 011		0.90907 CA AAD Adi		I
ļ	750		T TIME BASE	C120	D&D SKILLED TRADES	KA/0H	371 Facility Disposition Steelworkers	Linear	909.07	Hours
	Factors	1000	hours					0.90907 CA AAD Adi	ustmont Factor	
	750	STRAIGHT	T TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	5.454.41	Hours
,	Factors	6000	hours	. 0120	ibab divided 114.0E0	100001	OF THE COUNTY DISCOSSION COOM CINCIO	Elliodi	0.101.11	i louio
								0.90907 CA AAD Adi	ustment Factor	
	750	STRAIGHT	T TIME BASE	E120	SAFETY ENGINEERS	SA01S	SSOC 371 Closure Proiect	Linear	454.53	Hours
	Factors	500	hours							
ſ					T			0.90907 CA AAD Adi		
Į	750		T TIME BASE	E130	OTHER ENGINEERS	SA01S	SSOC 371 Closure Proiect	Linear	3.636.28	Hours
	Factors	4000	hours						<u>-</u> .	
ſ	750	OTD A IOLI	ETIME DAGE	1.000	MICCION CUE OREO II (EL TTOLL MO	1447011	074 F 111 B: 111 O: 1 I	0.90907 CA AAD Adi		J
l	750		T TIME BASE	L060	MISSION SUP SPEC II (FLTTCH. WS	KA/0H	3/1 Facility Disposition Steelworkers	Linear	909.07	Hours
	Factors	1000	hours					0.90907 CA AAD Adi	ustmont Foster	
ſ	750	STRAIGHT	T TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1.818.14	Hours
ı	Factors	2000	hours	I WOTO	II ONLINE IV / I E/ IIVI EE/ IBO / ONCO!	111000	TANKO CONCINCO	Linear	1.010.14	iriodis
	1 401015	2000						0.90907 CA AAD Adi	ustment Factor	
Į	750	STRAIGHT	T TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	454.53	
	Factors	500	hours							
ſ					1			0.90907 CA AAD Adi		
Į	750		T TIME BASE	M020	MANAGERS (GRADE 69 - 72)	SA01S	SSOC 371 Closure Proiect	Linear	454.53	Hours
	Factors	500	hours						_	
ſ		07041011	- TU 15 D 1 O 5	2000	IN IDMOTTAL AN ANCASTANCE	01010	222227	0.90907 CA AAD Adi		I
l	750		T TIME BASE	P090	INDUSTRIAL HYGIENISTS	SA01S	SSOC 371 Closure Proiect	Linear	454.53	Hours
	Factors	500	hours					0.90907 CA AAD Adi	ustmont Foster	
ſ	750	STRAIGHT	T TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	U.90907 CA AAD Adi	1 818 14	
٠	Factors	2000	hours	1 1000		10/11/01		Lincal	1.010.14	iriouis
								0.90907 CA AAD Adi	ustment Factor	
	A5C	SUPPLIES	3	0000	NONE	KA70S	B371 Facility Disposition	Linear	227.267.20	Dollars
	Factors	250000	dollars							
ſ					1			0.90907 CA AAD Adi		
ļ	A5C	SUPPLIES		0000	NONE	KA70S	B371 Facility Disposition	Linear	15.395.08	Dollars
	Factors	16935	Metal Crates @ 700/ea							
ſ	4511	OUDOONIT	DAOTED ODVO	F400	OTHER ENGINEERS	144700	DOT4 E 311 D1 311	0.90907 CA AAD Adi	ustment Factor 94.476.80	
ļ	A5H		RACTED SRVS dollars	E130	OTHER ENGINEERS	KA/US	B371 Facility Disposition	Linear	94.476.80	Dollars
	Factors	103927	uoliaiS					0.90907 CA AAD Adi	ustmont Factor	
								U.SUSUI CA AAD AU	usuneni Facioi	

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Ouantity Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	169.798.10 Dollars
	Factors 169798 Dollars				
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	79.355.29 Dollars

Factors 79355.3 Dollars

Activity ID: 1AD0003L10 Description: Set 3 - Process Areas - Dismantlement Cost Risk 4 Schedule Risk Line Item Description **Ouantity** Units BOELabor Labor Hours Labor Cost Materials/ Sub | Contingency Total Prime Burden Cost Total Cost Type Hours/Unit **Total Total** Cost & Escalation Cost 1AQEDIS120 Dismantlement - A5C only HC 1.001.869 1.00 ea n n 1.001.869 1.001.869 HC 1AQEDIS125 Dismantlement - A5C only 1.00 ea 0 0 776.095 0 776.095 0 776.095 Building Trades Building Trade Crew of 8 (268d x 2crews) 536.00 day EE 0 0 0 2.104.967 0 2.104.967 0 2.104.967 FF 2.529.390 Steekworkers 5 1 Steelworker Crew of 15 (572d x 2crews) 1.144.00 day 104 119.337 3.405.485 2.529.390 Λ n 876.096 Contingency And Escalation 1.00 ea EE 0 1.356.187 1.356.187 1.356.187 0 Λ 8.644.603 Total for Activity 1AD0003L10: 119.337 2.529.390 3.882.931 1.356.187 7.768.507 876.096

Line Item 1AQEDIS120 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 150,411.33 hrs, \$ 3,509,379 subcontracts, \$1,226,430 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 120,425.33 hours, \$2,809,749 subcontracts, \$981,929 supplies Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723
Revised Unit Cost - 207,493 hrs, \$4,841,198 subcontracts, \$1,691,864 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		Cost Element		Skill		Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.001.869.00	Dollars

Factors 1102083 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQEDIS125 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

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Starts In FY

Unit Cost - 112,368 hrs, \$2,621,760 subcontracts, \$916,232 supplies 1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 89,966 hours, \$ 2,099,086 subcontracts, \$733,572 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 155,012 hrs, \$3,616,725 subcontracts, \$1,263,944 supplies Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		Cost Element		Skill		Department	Curve	Ouantity	Units	
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	776.094.70	Dollars	

Factors 853725 Dollars

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (268d x 2crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-DwD workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 2 Crews @ 8 people per crew x 268 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s		(Cost Element			Skill			Department	Curve	Quantity	Units
A	\5B	CONSTRU	JCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 Fa	acility Disposition Steelworkers	Back Loaded	1.963.59	Dollars
Fa	ctors	4	Pipe Fitters		9	hours a day		60	\$/hr			
										0.90907 CA AAD Adiu	ustment Factor	
I	\5B	CONSTRU	JCTION	L090	GENERA	L LABORER	KA70H	371 Fa	acility Disposition Steelworkers	Back Loaded	981.79	Dollars
Fa	ctors	2	Laborers		9	hours a day		60	\$/hr			
										0.90907 CA AAD Adiu	stment Factor	
A	\5B	CONSTRI	JCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371 F	Facility Disposition	Back Loaded	490.90	Dollars
Fa	ctors	1	Foreman		9	hours a day		60	\$/hr			
										0.90907 CA AAD Adiu	ustment Factor	
A	\5B	CONSTRU	JCTION	T050	RADIATI	ON CONTROL TECHNOLIGI	KA70H	371 Fa	acility Disposition Steelworkers	Back Loaded	490.90	Dollars
Fa	ctors	1	RCT		9	hours a day		60	\$/hr			

Line Item Steekworkers - Steelworker Crew of 15 (572d x 2crews)

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY

Item - Building Trades Support

Units - 2 Crews @ 15 people per crew x 572 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill	Department	Curve	Ouantity Units
	750	STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworker	rs Linear	62.59 Hours
	_					<u> </u>

D&D Workers hours a day Factors 7.65

0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried Linear

Factors Foreman hours a day

0.90907 CA AAD Adjustment Factor T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers STRAIGHT TIME BASE

Factors 5 **RCTs** 7.65 hours a day

Line Item SYS - Contingency And Escalation

BOE

Resources

Line Item

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	868.777.10	Dollars
	Factors	868777 Dollars							
	FSC	ESCALATION	0000	NONE	7DFPT	No Department	Linear	487 409 40	Dollars

487409 Dollars Factors

Set 3 Decontamination

Contingency And Escalation

Activity ID: 1AD0003L20

Description: Set 3 - Process Areas - Decontamination

Cost Risk 4 Schedule Risk

Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Total Cost & Escalation Cost 79.738 969.266 1.049.004 22.486 1.071.490

156.650

1.228.140

22.486

0.90907 CA AAD Adjustment Factor

1.00 each 1.00 ea Total for Activity 1AD0003L20:

Units

BOE

Type

HC

FF

0 156.650 156.650 2,715 79.738 969.266 156.650 1.205.654

Line Item 3L20 - Set 3 Decontamination

BOE

3L20

SYS

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Labor

Hours/Unit

2.715

0

Labor Hours

Total

2.715

Item Desc - Decommissioning Decontamination

Description

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 7,505 hrs, \$2,275,072 subcontracts, \$48,086 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 12,931 hrs, \$3,919,949 subcontracts, \$82,852 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

_							
Resources	Cost Flement	Skill	Department	Curve	Quantity	Units	

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Austrian Tile

Baseline Devl 1AAD

					Activity Filter *		Starts In FY *
750 STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelw	orkers	Linear	719.07 Hours
Factors 791 hours							
						0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried		Linear	1.739.05 Hours
Factors 1913 hours							
		1				0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers		Linear	257.27 Hours
Factors 283 hours							
		1				0.90907 CA AAD A	diustment Factor
A5B CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition		Linear	518.470.10 Dollars
Factors 570331 dollars							
		1				0.90907 CA AAD A	diustment Factor
A5C SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition		Linear	43.713.48 Dollars
Factors 48086 dollars							
		1				0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Linear	9.011.60 Dollars
Factors 9913 dollars							
		1				0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Linear	398.071.30 Dollars
Factors 437889 dollars - Site Prep							

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	53.769.22	Dollars
1	Factors	53769.2 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	102.880.50	Dollars

Factors 102881 Dollars Activity ID: 1AD0003L30 Description: Set 3 - Process Areas - Final Survey

Basis for adjustment - See Below:

Cost Risk 2 Schedule Risk

0.90907 CA AAD Adjustment Factor

Line Item	Description	Quantity Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
3L30	Set 3 Final Survey	1.00 ea	HC	2.142	2.142	56.987	366.462	0	423.449	16.070	439.520
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	63.238	63.238	0	63.238
	Tota	al for Activity 1AD000		2.142	56.987	366.462	63.238	486.687	16.070	502.757	

Line Item 3L30 - Set 3 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data: Item - Final Survey Units - 1 lot Unit Cost - 5,499 hrs, \$371,140 subcontracts, \$31,276 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 9,475 hrs, \$639,475 subcontracts, \$53,889 supplies

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%

3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

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Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Proiect WBS Filter

Baseline Devl 1AAD

Starts In FY

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element	Skill	Department	Curve	Quantity Units
	750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	931.34 Hours

1024.5 Hours Factors

0.90907 CA AAD Adjustment Factor T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers STRAIGHT TIME BASE 750 Linear 1.210.88 Hours

1332 Hours Factors

0.90907 CA AAD Adjustment Factor A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition 28 482 04 Dollars Linear 31331 Dollars

Factors

0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 337 980 40 Dollars Linear

Factors 371788 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill		Department		Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	21.036.50	Dollars
_	Factors	21036.5 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	42.201.04	Dollars

Factors 42201.0 Dollars

Set 4 P&E

Activity ID: 1AD0004B10

Line Item

Description: Set 4 - CWTS & CSV Planning & Engineering

2 Schedule Risk Cost Risk

101.892

Materials/ Sub

Cost

509.859

509.859

718.751

Z Schedule Risk Z											
Contingency	Total Prime	Burden Cost	Total Cost								
& Escalation	Cost										
0	616.860	39.664	656.523								
101.892	101.892	0	101.892								

39.664

Line Item 4B10 - Set 4 P&E

BOE

4B10

SYS

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Labor

Hours/Unit

3.617

Labor Hours

Total

3.617

3.617

Λ

Labor Cost

Total

107.000

107.000

Item Desc - Decommissioning Planning & Engineering

Description

Breakdown of Historical Data:

Contingency And Escalation

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 2,017 hours, \$283,076 subcontracts, \$16,326 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,475 hrs, \$487,740 subcontracts, \$28,130 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

Ouantity

1.00 each

Total for Activity 1AD0004B10:

1.00 ea

Units

BOE

Type

HC

FF

- An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Skill Units Resources Cost Element Department Curve

WBS No: 1AAD Baseline Devl Proiect Rocky Flats Closure Project Activity ID: 1AD0004B10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY 750 STRAIGHT TIME BASE E130 OTHER ENGINEERS R100S RMRS Salaried 2.622.66 Hours Linear Factors 2885 Hours 0.90907 CA AAD Adjustment Factor 925.43 Hours 750 STRAIGHT TIME BASE G010 ADMINISTRATIVE ASSISTANTS R100S RMRS Salaried Linear 1018 Hours Factors 0.90907 CA AAD Adjustment Factor STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 69.09 Hours 750 Linear 76 Hours Factors 0.90907 CA AAD Adjustment Factor A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition Linear 27.801.14 Dollars 30582 Dollars **Factors** 0.90907 CA AAD Adjustment Factor KA70S B371 Facility Disposition A5H SUBCONTRACTED SRVS 0000 NONE Linear 396.205.80 Dollars Factors 435837 Dollars 0.90907 CA AAD Adjustment Factor 8.884.33 Dollars E050 ENVIRONMENTAL ENGINEERS KA70S B371 Facility Disposition A5H SUBCONTRACTED SRVS Linear Factors 9773 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS KA70S B371 Facility Disposition Linear 71.700.08 Dollars Factors 78872 Dollars 0.90907 CA AAD Adjustment Factor G010 ADMINISTRATIVE ASSISTANTS KA70S B371 Facility Disposition 5.268.05 Dollars A5H SUBCONTRACTED SRVS Linear 5795 Dollars Factors 0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve Units Quantity CON CONTINGENCY 0000 NONE ZDEPT No Department 64.509.27 Dollars Linear Factors 64509.3 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 37.382.31 Dollars Linear Factors 37382.3 Dollars Activity ID: 1AD0004B30 Description: Set 4 - CWTS & CSV Site Support Cost Risk 2 Schedule Risk Line Item Description Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Quantity Hours/Unit Total Total Cost & Escalation Cost Type4B30 Set 4 Site Support 1.00 each HC 14.122 14.122 307.894 1.913.263 Λ 2.221.156 110.340 2.331.496 Contingency And Escalation FF 393.056 393.056 393.056 SYS 1.00 ea Λ 0 0 Total for Activity 1AD0004B30: 14.122 307.894 1.913.263 393.056 2.614.213 110.340 2.724.552 Line Item 4B30 - Set 4 Site Support Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of BOE gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999. Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services Units - 1 lot Unit Cost - 7,830 hrs, \$1,049,193 subcontracts, \$70,558 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 13,491 hrs, \$1,807,760 subcontracts, \$121,571 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

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Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter Activity Filter

1AAD

Starts In FY

0.90907 CA AAD Adjustment Factor

4 Schedule Risk

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

3	Cost Element	Skill			Department	Curve	Quantity Units	
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	3.386.28 Hours	
Factors	3725 Hours							
						0.90907 CA AAD Ad	liustment Factor	
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	9.102.51 Hours	
Factors	10013 Hours							
						0.90907 CA AAD Ad	liustment Factor	
750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	1.633.60 Hours	
Factors	1797 Hours							
		ı				0.90907 CA AAD Ac	liustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	120.558.90 Dollars	
Factors	132618 Dollars							
				,		0.90907 CA AAD Ad	liustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.740.354.00 Dollars	
Factors	1914436 Dollars							
				,		0.90907 CA AAD Ad	liustment Factor	
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	14.946.91 Dollars	
Factors	16442 Dollars							
				,		0.90907 CA AAD Ad	liustment Factor	
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	14.961.46 Dollars	
Factors	16458 Dollars							
				1		0.90907 CA AAD Ad	liustment Factor	
A5H	SUBCONTRACTED SRVS	CONTRACTED SRVS E130 OTHER ENGINEERS		KA70S	B371 Facility Disposition	Linear	22.441.27 Dollars	
Factors	24686 Dollars							

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	250.551.60	Dollars
	Factors	250552 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	142.504.80	Dollars
	Factors	142505 Dollars							

Activity ID: 1AD0004L10 Description: Set 4 - CWTS - Dismantlement

Line Item	Description	Quantity Units		BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
1AQEDIS150	Dismantlement - A5C only	1.00	ea	HC	0	0	0	128.056	0	128.056	0	128.056	ı
1AQEDIS155	Dismantlement - A5C only	1.00	ea	HC	0	0 0		640.218	0	640.218	0	640.218	ı
1AQEDIS157	Dismantlement - A5C only	1.00	ea	HC	0	0	0	640.218	0	640.218	0	640.218	ı
Building Trades	Building Trade Crew of 8 (227d x 2crews)	454.00	dav	EE	0	0	0	1.782.939	0	1.782.939	0	1.782.939	ı
Steekworkers	Steelworker Crew of 15 (660d x 1crew)	660.00	dav	EE	104	68.848	1.459.263	0	0	1.459.263	515.234	1.974.498	ı
Steekworkers1	Steelworker Crew of 15 (150d x 3crews)	450.00	450.00 day		104	46.942	994.952	0	0	994.952	291.976	1.286.928	ı
SYS	Contingency And Escalation	1.00	1 00 ea		0	0	0	0	1 167 754	1 167 754	0	1 167 754	i

Total for Activity 1AD0004L10:

Line Item 1AQEDIS150 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

115.790

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Cost Risk

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY *

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data: Item - Dismantlement Units - 1 lot Unit Cost - 11,342 hrs, \$264,638 subcontracts, \$92,484 supplies 1st Unit Cost Adjustment factor - .884 Revised Unit Cost - 10,027 hours, \$233,940 subcontracts, \$81,756 supplies Basis for adjustment - Unit cost reduced by .884 to account for availability of size reduction facility for all of FY02. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 17,276 hrs, \$403,078 subcontracts, \$140,865 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element		Skill		Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Max Backload	128.055.60	Dollars

Factors 140865 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQEDIS155 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data: Item - Dismantlement Units - 1 lot Unit Cost - 62,613 hrs, \$1,460,889 subcontracts, \$510,540 supplies Unit Cost Adjustment factor - .8006 1st Revised Unit Cost - 50,128 hours, \$1,169,588 subcontracts, \$408,738 supplies Basis for adjustment - Unit cost reduced by .834 to account for availability of size reduction facility and the elimination of the Protected Area reduced costs by .96. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 86,371 hrs, \$2,015,200 subcontracts, \$704,256 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Max Backload	640.217.50	Dollars

Factors 704256 Dollars

0.90907 CA AAD Adjustment Factor

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Line Item 1AQEDIS157 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 62,613 hrs, \$1,460,889 subcontracts, \$510,540 supplies

Unit Cost Adjustment factor - .8006

1st Revised Unit Cost - 50,128 hours, \$1,169,588 subcontracts, \$408,738 supplies Basis for adjustment - Unit cost reduced by .834 to account for availability of size reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 86,371 hrs, \$2,015,200 subcontracts, \$704,256 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management
Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces	Cost Element	Skill	Department	Curve	Quantity	Units
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Max Backload	640.217.80 Do	ollars

Factors 704257 Dollars

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Line Item Building Trades - Building Trade Crew of 8 (227d x 2crews)

Units - 2 Crews @ 8 people per crew x 227 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

s	Cost Element	Skill			Department				Curve	Quantity	Units
A5B	CONSTRUCTION	C080	PLUMBER	RS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers		Max Backload	1.963.59 Dollars	
Factors	4 Pipe Fitters		9	hours a day		60	\$/hr				
									0.90907 CA AAD Adii	ustment Factor	
A5B	CONSTRUCTION	L090	GENERAL	LABORER	KA70H	371 F	acility Disposition Steelworkers		Max Backload	981.79	Dollars
Factors	2 Laborers		9	hours a day		60	\$/hr				
_									0.90907 CA AAD Adii	ustment Factor	
A5B	CONSTRUCTION	M010	FOREMEN	/ TEAM LEADS / GROUP	KA70S	B371	Facility Disposition		Max Backload	490.90	Dollars
Factors	1 Foreman		9	hours a day		60	\$/hr				
									0.90907 CA AAD Adii	ustment Factor	
A5B	A5B CONSTRUCTION		RADIATIO	N CONTROL TECHNOLIGI	KA70H	371 F	acility Disposition Steelworkers		Max Backload	490.90	Dollars
Factors	Factors 1 RCT		9	hours a day		60	\$/hr				
									0.90907 CA AAD Adju	stment Factor	

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Proiect Baseline Devl WBS Filter 1AAD Activity Filter

Starts In FY

Line Item Steekworkers - Steelworker Crew of 15 (660d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crews @ 15 people per crew x 660 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill	Department	Curve	Quantity Units
	750	STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	62.59 Hours
	P .	O DOD W	7.05			

Factors D&D Workers hours a day 7.65

0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 6.95 Hours Linear

7.65 **Factors** Foreman hours a day

0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI | KA10H | 371 Complex Steelworkers 34.77 Hours Linear

RCTs 7.65 hours a day Factors

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Line Item Steekworkers1 - Steelworker Crew of 15 (150d x 3crews)

Units - 3 Crews @ 15 people per crew x 150 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		(Cost Element			Skill		Department	Curve	Quantity	Units
	750	STRAIGH	IT TIME BASE	C120	D&D SKII	LLED TRADES		371 Facility Disposition Steelworkers	Max Backload	62.59	Hours
	Factors	9	D&D Workers		7.65	hours a day					

0.90907 CA AAD Adjustment Factor STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 750 Max Backload 6.95 Hours 7.65 hours a day Factors Foreman

0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE RADIATION CONTROL TECHNOLIGI | KA10H | 371 Complex Steelworkers Max Backload 34.77 Hours

Factors 5 **RCTs** 7.65 hours a day

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	629.735.80	Dollars
	Factors	629736 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	538,018.30	Dollars
	г.	500040 D-II							

538018 Dollars Factors

Activity ID: 1AD0004L1A Description: Set 4 - CSV (Stack/Retrv) - Dismantlement Cost Risk 5 Schedule Risk

Rocky Flats Closure Project

Proiect WBS Filter

2.463.631

3.095.407

Baseline Devl 1AAD

_				Racolino (*	net an	d Basis of E	-etimata						
				Jascillic O	OSt an	ia basis oi L	-Stilliate	Acti	vity Filter *		Stc	arts In FY *	
	Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Ī
					Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		L
	Steekworkers	Steelworker Crew of 15 (350d x 4crews)	1.400.00	dav	EE	104	146.042	3.095.407	0	0	3.095.407	977.558	l

HC

FF

1.00 each 1.00 ea Total for Activity 1AD0004L1A: 2.463.631 2.463.631 2.463.631 1.468.440 1.468.440 1.468.440

1.468.440

7.027.478

0.00007 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Total Cost

4.072.964

8 005 036

977.558

Contingency And Escalation Line Item Steekworkers - Steelworker Crew of 15 (350d x 4crews)

Set 4 Dismantlement - A5C only

Steelworker Crew of 15 (350d x 4crews)

BOE

Supplies

SYS

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Λ

Λ

146.042

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0

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 4 Crews @ 15 people per crew x 350 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill		Department	Curve	Ouantity	Units
	750	STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	62.59	Hours
	_							

Factors 9 D&D Workers 7 65 hours a day

						0.90907 CA AAD AGIL	usimeni Facioi	
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	6.95	Hours

Factors 1 Foreman 7.65 hours a day

								U.SUSUI CA AAD AUIL	JOHN TO ACION
750	STRAIGHT	TTIME BASE	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	34.77 Hours
Factors	5	RCTs		7.65	hours a day				

Line Item Supplies - Set 4 Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Ttem - Dismantlement

Units - 1 lot

Unit Cost - 11,342 hrs, \$264,638 subcontracts, \$92,484 supplies

1st Unit Cost Adjustment factor - .884

Revised Unit Cost - 10,027 hours, \$233,940 subcontracts, \$81,756 supplies

Basis for adjustment - Unit cost reduced by .884 to account for availability of size

reduction facility for all of FY02.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 17,276 hrs, \$403,078 subcontracts, \$140,865 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Cost Element Skill Curve Quantity Units Resources Department 6/22/00 8:38:19 PM Page 27 of 135 OFFICIAL USE ONLY WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0004L1A WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

Activity Filter Starts In FY A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition Linear 2.463.631.00 Dollars

Factors 2710060 dollars for equip/fogging/coating

0.90907 CA AAD Adjustment Factor

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON CONTI	INGENCY	0000 N	NONE	ZDEPT	No Department	Linear	910.214.20	Dollars
F	actors 910	0214 Dollars							
	ESC ESCAL	LATION	0000 N	NONE	ZDEPT	No Department	Linear	558.226.20	Dollars

Factors 558226 Dollars

Activity ID: 1AD0004L20 Description: Set 4 - CWTS - Decontamination Cost Risk 4 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
4L20	Set 4 CWTS Decontamination	1.00	each	HC	2.351	2.351	69.031	1.827.118	0	1.896.149	21.342	1.917.491
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	595.088	595.088	0	595.088
	Tot	2.351	69.031	1.827.118	595.088	2.491.237	21.342	2.512.579				

Line Item 4L20 - Set 4 CWTS Decontamination

Line Item SYS - Contingency And Escalation

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 7,538 hrs, \$2,284,709 subcontracts, \$48,290 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 12,988 hrs, \$3,936,554 subcontracts, \$83,203 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

s	Cost Element		Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Back Loaded	622.71	Hours
Factors	685 hours							
						0.90907 CA AAD Adi	ustment Factor	
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Back Loaded	1.505.42	Hours
Factors	1656 hours							
						0.90907 CA AAD Adi	ustment Factor	
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Back Loaded	222.72	Hours
Factors	245 hours							
						0.90907 CA AAD Adi	ustment Factor	
A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Back Loaded	1.437.112.00	Dollars
Factors	1580862 dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Back Loaded	37.819.08	Dollars
Factors	41602 dollars							
						0.90907 CA AAD Adi	ustment Factor	

WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0004L20 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

Starts In FY A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 344.390.70 Dollars Back Loaded Factors 378839 dollars - Site Prep

0.90907 CA AAD Adjustment Factor

0000 NONE KA70S B371 Facility Disposition 7.796.17 Dollars A5H SUBCONTRACTED SRVS Back Loaded 8576 dollars

Factors

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	364.419.60	Dollars
	Factors	364420 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	230.668.40	Dollars

230668 Dollars

Activity ID: 1AD0004L2A Description: Set 4 - CSV (Stack/Retry) - Decontamination Cost Risk 5 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
4L2A	Set 4 CSV Decontamination	1.00	each	HC	2.733	2.733	80.243	906.793	0	987.035	26.627	1.013.662
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	450.080	450.080	0	450.080
	Tot	al for Activi	ty 1AD0004l	_2A:		2.733	80.243	906.793	450.080	1.437.115	26.627	1.463.742

Line Item 4L2A - Set 4 CSV Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 7,538 hrs, \$2,284,709 subcontracts, \$48,290 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 12,988 hrs, \$3,936,554 subcontracts, \$83,203 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es						Department	Curve	Ouantity	Units
L	750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Back Loaded	723.62	Hours
	Factors	796 hours							
-							0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Back Loaded	1.749.96	Hours
	Factors	1925 hours							
							0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Back Loaded	259.08	Hours
	Factors	285 hours							
_							0.90907 CA AAD Adii	stment Factor	
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Back Loaded	453.320.80	Dollars
	Factors	498665 dollars							
_							0.90907 CA AAD Adiu	stment Factor	

Rockv Flats Closure Project Baseline Cost and Basis of Estimate Project WBS Filter 1AAD 1Activity Filter **

			baseline Cost ar	iu basis	orestimate	Activity Filter	*	Starts In FY *			
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition		Back Loaded	43.975.30 Dollars			
Factors	48374 dollars										
_							0.90907 CA AAD Adius	stment Factor			
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Back Loaded	9.065.23 Dollars			
Factors	9972 dollars										
	0.90907 CA AAD Adjustment Factor										
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Back Loaded	400.431.20 Dollars			

Factors 440485 dollars - Site Prep

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

1AAD

1AD0004L2A

BOE

WBS No:

Activity ID:

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	307.617.50	Dollars
	Factors	307618 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	142.462.20	Dollars

Factors 142462 Dollars

Activity ID: 1AD0004L30 Description: Set 4 - CWTS & CSV - Final Survey

Cost Risk 2 Schedule Risk

3

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
4L30	Set 4 Final Survey	1.00	each	HC	2.156	2.156	57.349	368.656	0	426.006	19.958	445.963
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	240.947	240.947	0	240.947
	Tot	al for Activi	2.156	57.349	368.656	240.947	666.953	19.958	686.911			

Line Item 4L30 - Set 4 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey

Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 5,533 hrs, \$373,362 subcontracts, \$31,464 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 9,533 hrs, \$643,303 subcontracts, \$54,212 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

s	Cost Element		Skill		Department	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Back Loaded	937.25 Hours
Factors	1031 Hours						
						0.90907 CA AAD Adi	iustment Factor
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Back Loaded	1.218.61 Hours
Factors	1340.5 Hours						
						0.90907 CA AAD Adi	iustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Back Loaded	28.652.49 Dollars
Factors	31518.5 Dollars						
						0.90907 CA AAD Adi	iustment Factor

WBS No: 1AAD
Activity ID: 1AD0004L30

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

WBS Filter
1AAD
Activity Filter
**

A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition Back Loaded 340,004.00 Dollars

Factors 374014 Dollars

0.90907 CA AAD Adjustment Factor

Starts In FY

Line Item SYS - Contingency And Escalation

ROF

Resources

es	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	171.860.80	Dollars
Factors	s 171861 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	69.086.64	Dollars

Factors 69086.6 Dollars

Activity ID: 1AD0005B10 Description: Set 5 - Utly Areas/Dissol Planning & Engineerin Cost Risk 2 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
5B10	Set 5 P&E	1.00	each	нс	1.355	1.355	40.089	191.005	0	231.094	13.368	244.462
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	50.946	50.946	0	50.946
	Tot		1.355	40.089	191.005	50.946	282.041	13.368	295.408			

Line Item 5B10 - Set 5 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 852 hours, \$119,633 subcontracts, \$6,900 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 1,468 hrs, \$206,128 subcontracts, \$11,889 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es	Cost Element Skill				Skill		Department	Curve	Ouantity	Units	
L	750	STRAIGHT	TTIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linea	ır	982.70 H	Hours
I	Factors	1081	Hours								
							T	0.90907 C	A AAD Adjustm	nent Factor	
L	750	STRAIGHT	ΓTIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linea	ır	347.26 H	Hours
I	Factors	382	Hours								
_								0.90907 C	A AAD Adjustm	nent Factor	
	750	STRAIGHT	TTIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linea	ır	25.45 l	Hours
F	Factors	28	Hours								
_								0.90907 C	A AAD Adjustm	nent Factor	
	A5C	SUPPLIES	.	0000	NONE	KA70S	B371 Facility Disposition	Linea	ır	10.415.20	Dollars
I	Factors	11457	Dollars								
_		_						0.90907 C	A AAD Adjustm	nent Factor	
	A5H	SUBCONT	RACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linea	ır	148.428.20	Dollars
F	Factors .	163275	Dollars								
_								0.90907 C	A AAD Adiustm	nent Factor	

WBS No: 1AAD Baseline Devl Proiect Rocky Flats Closure Project Activity ID: 1AD0005B10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY SUBCONTRACTED SRVS E050 ENVIRONMENTAL ENGINEERS KA70S B371 Facility Disposition 3.328.10 Dollars Linear Factors 3661 Dollars 0.90907 CA AAD Adjustment Factor SUBCONTRACTED SRVS E130 OTHER ENGINEERS KA70S B371 Facility Disposition 26.860.26 Dollars A5H Linear 29547 Dollars Factors 0.90907 CA AAD Adjustment Factor G010 ADMINISTRATIVE ASSISTANTS A5H SUBCONTRACTED SRVS KA70S B371 Facility Disposition 1.973.59 Dollars Linear 2171 Dollars Factors 0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve **Ouantity** Units 32.997.07 Dollars CON CONTINGENCY 0000 NONE ZDEPT No Department Linear Factors 32997.1 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 17.948.98 Dollars Linear 17949 Dollars Activity ID: 1AD0005B30 Cost Risk 1 Schedule Risk Description: Set 5 - Utly Areas/Dissol Site Support Line Item Description Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost **Ouantity** Hours/Unit & Escalation TypeTotal Total Cost Cost 5B30 Set 5 Site Support HC 5.291 5.291 115.354 716.754 832.109 38.819 870.928 1.00 each SYS Contingency And Escalation 1.00 ea FF 190.400 190,400 190,400 5.291 115.354 1.022.509 Total for Activity 1AD0005B30: 716.754 190.400 38.819 1.061.328 Line Item 5B30 - Set 5 Site Support Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of BOE gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999. Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services Units - 1 lot Unit Cost - 3,309 hrs, \$443,410 subcontracts, \$29,819 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 5,701 hrs, \$763,995 subcontracts, \$51,378 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction. Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions. Resources

es	Cost Element		Skill		Department	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	1.269.06 Hours
Factors	1396 Hours						
						0.90907 CA AAD Adiy	ustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	3.409.92 Hours
Factors	3751 Hours						
						0.90907 CA AAD Adiy	ustment Factor
750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	611.80 Hours
Factors	673 Hours						
						0.90907 CA AAD Adiu	ustment Factor

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WBS No: 1AAD
Rocky Flats Closure Project Project Baseline Devl
Activity ID: 1AD0005B30
Rocky Flats Closure Project WBS Filter
Baseline Cost and Basis of Estimate

						Activity Filter *	Starts In FY *
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	45.164.36 Dollars
Factors	49682 Dollars						
						0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	651.977.80 Dollars
Factors	717193 Dollars						
						0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	5.599.86 Dollars
Factors	6160 Dollars						
						0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	5.605.32 Dollars
Factors	6166 Dollars						
						0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	8.407.07 Dollars
Factors	9248 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill	Department	Curve	Ouantity Units
	CON	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	125.570.40 Dollars
	Factors	125570 Dollars				
	ESC	ESCALATION	0000 NONE	ZDEPT No Department	Linear	64.829.76 Dollars

Factors 64829.8 Dollars

Activity ID: 1AD0005L10 Description: Set 5 - Utly Areas/Dissol - Dismantlement

ACTIVITY ID. TAL	Description. Set 3 - Otty Areas/Dissor - D		Cost Risk 4 Schedule Risk 4									
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS170	Dismantlement - A5C only	1.00	ea	HC	0	0	0	821.751	0	821.751	0	821.751
1AQEDIS175 Dismantlement - A5C only			1.00 ea		0	0	0	412.114	0	412.114	0	412.114
Building Trades	Building Trade Crew of 8 (138d x 1crew)	138.00	dav	EE	0	0	0	541.950	0	541.950	0	541.950
Steekworkers	Steelworker Crew of 15 (336d x 3crews)	1.008.00	dav	EE	104	105.150	2.228.693	0	0	2.228.693	738.127	2.966.820
SYS Contingency And Escalation		1.00 ea		EE	0	0	0	0	1.044.666	1.044.666	0	1.044.666
	To	Total for Activity 1AD0005I 10:				105 150	2 228 603	1 775 816	1 044 666	5 0/0 17/	738 127	5 787 301

Line Item 1AQEDIS170 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 72,785.22 hrs, \$1,698,216 subcontracts, \$593,479 supplies

1st Unit Cost Adjustment factor - .884

Revised Unit Cost - 64,342.13 hours, \$1,501,223 subcontracts, \$524,636 supplies

Basis for adjustment - Unit cost reduced by .884 to account for availability of size

reduction facility for all of FY02.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 110,861 hrs, \$2,586,607 subcontracts, \$903,948 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006

to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management

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Cost Diele

0.90907 CA AAD Adjustment Factor

A Cabadula Diele

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY

Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill	Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	821.750.80	Dollars

Factors 903948 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQEDIS175 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 40,302.92 hrs, \$940,343 subcontracts, \$328,624 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 32,268.13 hours, \$752.876 subcontracts, \$263,109 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 55,598 hrs, \$1,297,205 subcontracts, \$453,337 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill	Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	412.114.40	Dollars

Factors 453337 Dollars

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (138d x 1crew) BOF Estimators Experience - This BOE was devel

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crews @ 8 people per crew x 138 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es l	Cost Etement				Skiii				Department	Curve	Quantity	Unus
	A5B	CONSTR	RUCTION	C080	PLUME	BERS AND PIPEFITTERS	KA70H	371 Fa	cility Disposition Steelworkers	Back Loaded	1.963.59	Dollars
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr			
										0.90907 CA AAD Adi	ustment Factor	

WBS No: 1AAD Proiect Baseline Devl Rocky Flats Closure Project Activity ID: 1AD0005L10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter KA70H 371 Facility Disposition Steelworkers A5B CONSTRUCTION L090 GENERAL LABORER Back Loaded Factors 2 Laborers hours a day 0.90907 CA AAD Adjustment Factor CONSTRUCTION M010 FOREMEN / TEAM LEADS / GROUP KA70S B371 Facility Disposition Back Loaded A5B hours a day Factors Foreman 60

hours a day

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

4 Schedule Risk

Back Loaded

0.90907 CA AAD Adjustment Factor

Starts In FY

981 79 Dollars

490.90 Dollars

490.90 Dollars

Line Item Steekworkers - Steelworker Crew of 15 (336d x 3crews)

RCT

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

60

\$/hr

T050 RADIATION CONTROL TECHNOLIGI KA70H 371 Facility Disposition Steelworkers

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

A5B CONSTRUCTION

Factors

Item - Building Trades Support

Units - 3 Crews @ 15 people per crew x 336 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es			Cost Element			Skill		Department	Curve	Quantity	Units
	750	STRAIGH	IT TIME BASE	C120	&D SKIL	LED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	62.59	Hours
	Factors	9	D&D Workers		7.65	hours a day					

						0.90907 CA AAD Adit	ustment Factor
750	STRAIGH	HT TIME BASE	M010 F0	OREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	6.95 Hours
Factors	1	Foreman		7.65 hours a day			

0.90907 CA AAD Adjustment Factor STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers Linear 34.77 Hours

Factors 5 **RCTs** 7.65 hours a day

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	680.669.70	Dollars
	Factors	680670 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	363.995.90	Dollars
	Factors	363996 Dollars							

Activity ID: 1AD0005L20 Description: Set 5 - Utly Areas/Dissol - Decontamination

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost		
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost				
5L20	Set 5 Decontamination	1.00 ead		HC	1,154	1,154	33,879	844,284	0	878,163	9,554	887,717		
SYS	Contingency And Escalation	1.00 ea		EE	0	0	0	0	129,782	129,782	0	129,782		
Total for Activity 1AD0005L2						1,154	33,879	844,284	129,782	1,007,946	9,554	1,017,500		

Line Item 5L20 - Set 5 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Cost Risk

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter

*

Baseline Devl
1AAD

*

**

Unit Cost - 3,190 hrs, \$967,246 subcontracts, \$20,444 supplies
Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 5,496 hrs, \$1,666,565 subcontracts, \$35,225 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

1AD0005L20

Cost Eleme	ent	Skill		<u>Department</u>	Curve	Ouantity Uni	its
750 STRAIGHT TIME B	ASE C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	305.45 Hours	s
Factors 336 hours							
					0.90907 CA AAD	Adjustment Factor	
750 STRAIGHT TIME E	ASE E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	739.07 Hours	S
Factors 813 hours							
					0.90907 CA AAD	Adjustment Factor	
750 STRAIGHT TIME E	ASE T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	109.09 Hours	S
Factors 120 hours							
					0.90907 CA AAD	Adjustment Factor	
A5B CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	652,628.70 Dollar	rs
Factors 717909 dollars							
					0.90907 CA AAD	Adjustment Factor	
A5C SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	18,585.00 Dollar	ırs
Factors 20444 dollars							
					0.90907 CA AAD	Adjustment Factor	
A5H SUBCONTRACTE	O SRVS 0000	NONE	KA70S	B371 Facility Disposition	Linear	169,239.50 Dollar	ırs
Factors 186168 dollars	- Site Prep						
					0.90907 CA AAD	Adjustment Factor	
A5H SUBCONTRACTE	O SRVS 0000	NONE	KA70S	B371 Facility Disposition	Linear	3.830.82 Dollar	rs
Factors 4214 dollars							

Line Item SYS - Contingency And Escalation

BOE

Resources

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	44.547.18	Dollars
_	Factors	44547.2 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	85.235.29	Oollars

Factors 85235.3 Dollars

tivity ID: 1AD0005L30 Description: Set 5 - Utly Areas/Dissol - Final Survey

~	CLIVILY ID. TADO	Description. Set 3 - Oily Aleas/Dissol - I in	Cost Risk 2 Schedule Risk 3										
Line Item		Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
					Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
5	5L30	Set 5 Final Survey	1.00	each	HC	939	939	24.814	155.802	0	180.616	6.998	187.614
S	SYS	Contingency And Escalation		ea	EE	0	0	0	0	26.994	26.994	0	26.994
Total for Activity 1AD0005L30:								24.814	155.802	26.994	207.610	6.998	214.607

Line Item 5L30 - Set 5 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

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0.90907 CA AAD Adjustment Factor

2 Sahadula Piek

Starts In FY

WBS No: 1AAD Activity ID: 1AD0005L30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

Starts In FY

Activity Filter Item Desc - Decommissioning Final Survey Breakdown of Historical Data: Item - Final Survey Units - 1 lot Unit Cost - 2,338 hrs, \$157,790 subcontracts, \$13,297 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 4,028 hrs, \$271,873 subcontracts, \$22,911 supplies Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	395.90	Hours
	Factors	435.5 Hours							

		0.90907 CA AAD Adjustment Factor
750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers	Linear 543.17 Hours

Factors 597.5 Hours

			0.90907 CA AAD Adi	ustment Factor
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	12.109.25 Dollars
Factors 13320.5 Dollars				

0.90907 CA AAD Adjustment Factor 0000 NONE KA70S B371 Facility Disposition A5H SUBCONTRACTED SRVS Linear 143.692.40 Dollars

Factors 158066 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	8.979.66	Dollars
	Factors	8979.66 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	18.013.98	Dollars
	Factors	18014 Dollars							

Activity ID: 1AD0006B10 Description: Set 6 - Fluorination Area Planning & Engineering

Cost Risk 2 Schedule Risk 2	
-----------------------------	--

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
6B10	Set 6 P&E	1.00	each	НС	587	587	17.378	82.827	0	100.205	7.268	107.473
SYS	Contingency And Escalation			EE	0	0	0	0	10.268	10.268	0	10.268
Total for Activity 1AD0006B10:							17.378	82.827	10.268	110.473	7.268	117.741

Line Item 6B10 - Set 6 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering Breakdown of Historical Data: Item - Planning & Engineering

Units - 1 lot

Unit Cost - 708 hours, \$99,414 subcontracts, \$5,734 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 1,220 hrs, \$171,290 subcontracts, \$9,880 supplies

Rocky Flats Closure Project Baseline Cost and Basis of Estimate Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

1AD0006B10

	Cost Element		Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	426.35	Hours
Factors	469 Hours							
						0.90907 CA AAD A	diustment Factor	
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	150.00	Hours
Factors	165 Hours							
						0.90907 CA AAD A	diustment Factor	
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	10.91	Hours
Factors	12 Hours							
						0.90907 CA AAD A	diustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	4.516.25	Dollars
Factors	4968 Dollars							
						0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	64.363.89	Dollars
Factors	70802 Dollars							
	. 0002 Bellare					0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	F050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear		Dollars
Factors	1588 Dollars	. =000						
1 delors	1000 Bollaro					0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	F130	OTHER ENGINEERS	KΔ70S	B371 Facility Disposition	Linear	11.647.90	I
Factors	12813 Dollars	1 2100	IOTHER ENGINEERO	10000	BOT I Tacility Bisbosition	Lincal	11.047.50	iDollars
1 uctors	12010 Bollais					0.90907 CA AAD A	diustment Factor	
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	ΚΔ70S	B371 Facility Disposition	Linear		Dollars
		, G010	INDIVIDUATIVE ASSISTANTS	100/00	DST 1 ACIIILY DISDOSITION	Lilleai	000.40	IDOIIAIS
Factors	341 Dollal 5							

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resource

ces		Cost Element	Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	6.712.69	Dollars
	Factors	6712.69 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3,555,34	Dollars

Factors 3555.34 Dollars

Activity ID: 1AD0006B30 Description: Set 6 -Fluorination Area Site Support

Activity ID: 1AD	Description: Set 6 -Fluorination Area Site	Support				Cost Risk 1 Schedule Risk 1					
Line Item	Description	Quantity Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
6B30	Set 6 Site Support	1.00 each	HC	2.294	2.294	50.021	310.810	0	360.831	20.927	381.758
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	36.101	36.101	0	36.101
	Tot	tal for Activity 1AD000	6B30:		2.294	50.021	310.810	36.101	396.931	20.927	417.858

Line Item 6B30 - Set 6 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

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WBS No: 1AAD Activity ID: 1AD0006B30

BOE

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY *

Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services Units - 1 lot Unit Cost - 2,750 hrs, \$368,467 subcontracts, \$24,779 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 4,738 hrs, \$634,869 subcontracts, \$42,694 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction. Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions. Resources Cost Element Curve Quantity Units Departmen E130 OTHER ENGINEERS 750 STRAIGHT TIME BASE R100S RMRS Salaried Linear 549 99 Hours Factors 605 Hours 0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE G010 ADMINISTRATIVE ASSISTANTS R100S RMRS Salaried Linear 1 479 05 Hours 1627 Hours 0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE P150 TRAINERS R100S RMRS Salaried 265.45 Hours Linear Factors 292 Hours 0.90907 CA AAD Adjustment Factor A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition 19.584.98 Dollars Linear Factors 21544 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 282,720,40 Dollars Linear Factors 311000 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS E110 QUALITY CONTROL ENGINEERS KA70S B371 Facility Disposition Linear 2 428 12 Dollars Factors 2671 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS E120 SAFETY ENGINEERS KA70S B371 Facility Disposition Linear 2.430.85 Dollars Factors 2674 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS KA70S B371 Facility Disposition 3.645.37 Dollars Linear Factors 4010 Dollars 0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation Resources Cost Element Skill Department Ouantity Units Curve CON CONTINGENCY 0000 NONE 23.472.49 Dollars ZDEPT No Department Linear Factors 23472.5 Dollars 12.628.05 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department Linear Factors 12628.1 Dollars Activity ID: 1AD0006L10 Cost Risk 4 Schedule Risk Description: Set 6 - Fluorination Area - Dismantlement Line Item Description **Ouantity** Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Type Hours/Unit Total Total Cost & Escalation Cost

WBS No: 1AAD Proiect Baseline Devl **Rocky Flats Closure Project** Activity ID: 1AD0006L10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

Daseline Cost and Dasis Of Estimate Activity Filter * Starts In FY *											
1AQEDIS130	Dismantlement - A5C only	1.00	ea HC	0	0	0	968.962	0	968.962	0	968.962
Building Trades	Building Trade Crew of 8 (180d x 1crew)	180.00	dav EE	0	0	0	706.892	0	706.892	0	706.892
Steekworkers	Steelworker Crew of 15 (323d x 1crew)	323.00	dav EE	104	33.694	714.155	0	0	714.155	293.422	1.007.577
SYS	Contingency And Escalation	1.00	ea EE	0	0	0	0	276.604	276.604	0	276.604
Total for Activity 1AD0006L10:						714.155	1.675.854	276.604	2.666.612	293,422	2.960.034

Line Item 1AQEDIS130 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 94,760 hrs, \$2,210,930 subcontracts, \$772,658 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 75,869 hours, \$1,770,159 subcontracts, \$618,621 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 130,722 hrs, \$3,049,984 subcontracts, \$1,065,884 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element	Skill	Department	Curve	Ouantity U	Units
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	968.961.90 Doll	lars

1065884 Dollars Factors

0.90907 CA AAD Adjustment Factor

Ouantity

Units

Curve

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Department

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Cost Element

Line Item Building Trades - Building Trade Crew of 8 (180d x 1crew)

Units - 1 Crews @ 8 people per crew x 180 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

A5B	CONST	RUCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA701	1 371 F	acility Disposition Steelworkers	Linear	1.963.59 Dollars
Factors	4	Pipe Fitters		9	hours a day		60	\$/hr		
									0.90907 CA AAD A	diustment Factor
A5B	CONST	RUCTION	L090	GENERA	L LABORER	KA70I	1 371 F	acility Disposition Steelworkers	Linear	981.79 Dollars
Factors	2	Laborers		9	hours a day		60	\$/hr		
									0.90907 CA AAD A	diustment Factor

WBS No: 1AAD Baseline Devl Proiect Rocky Flats Closure Project Activity ID: 1AD0006L10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

					Activity Fitter		Suris In P. I
A5B	CONSTRUCTION	M010	FOREMEN / TEAM LEADS / GROUP	KA70S	B371 Facility Disposition	Linear	490.90 Dollars
	_		•		·	·	

Factors Foreman hours a day

0.90907 CA AAD Adjustment Factor T050 RADIATION CONTROL TECHNOLIGI KA70H 371 Facility Disposition Steelworkers 490.90 Dollars CONSTRUCTION Linear

RCT hours a day 60 Factors

Line Item Steekworkers - Steelworker Crew of 15 (323d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crews @ 15 people per crew x 323 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces	Cost Element Skill		Skill		Department	Curve	Quantity	Units	
	750 STRAIGHT TIME BASE		C120	D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers		Linear	62.59	Hours

D&D Workers Factors hours a day

0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 6.95 Hours Linear

Factors Foreman hours a day

0.90907 CA AAD Adjustment Factor T050 RADIATION CONTROL TECHNOLIGI | KA10H | 371 Complex Steelworkers 34,77 Hours STRAIGHT TIME BASE Linear

Factors 5 **RCTs** 7 65 hours a day

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Canada La EV

Line Item SYS - Contingency And Escalation

BOE

Resources	
	ſ

ces	Cost Element Skill			Department	Curve	Ouantity	Units		
	CON CONTINGENCY 0000 NONE		ZDEPT	No Department	Linear				
	Factors	183958 Dollars							
	FSC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	92 646 18	Dollars

Factors 92646.2 Dollars

Activity ID: 1AD0006L20

Description:	Set 6 -	Fluorination	Area .	 Decontai 	mination

4 Schedule Risk Cost Risk

Auginian Filana

Line Item	Description	Quantity	Units B	OE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			T	ype	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
6L20	Set 6 Decontamination	1.00 e	ach F	НС	1.654	1.654	48.558	1.285.577	0	1.334.135	17.141	1.351.276
SYS	Contingency And Escalation	1.00 e	a E	EE	0	0	0	0	208,468	208,468	0	208,468
	Total for Activity 1AD0006L20:					1.654	48.558	1.285.577	208.468	1.542.604	17.141	1.559.745

Line Item 6L20 - Set 6 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 2,652 hrs, \$803,768 subcontracts, \$16,998 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 4,569 hrs, \$1,384,892 subcontracts, \$29,270 supplies Basis for adjustment - See Below:

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Proiect **Rocky Flats Closure Project Baseline Cost and Basis of Estimate**

Baseline Devl WBS Filter

1AAD

Starts In FY

0.90907 CA AAD Adjustment Factor

202.491

14.456

31.875

Activity Filter An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

1AD0006L20

s	Cost Element		Skill		Department	Curve	Quantity Units				
750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	438.17 Hours				
Factors	482 hours										
				,		0.90907 CA AAD A	diustment Factor				
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	1.059.07 Hours				
Factors	1165 hours										
		_				0.90907 CA AAD A	diustment Factor				
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	156.36 Hours				
Factors	172 hours										
		_				0.90907 CA AAD Adjustment Factor					
A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.011.162.00 Dollars				
Factors	1112305 dollars										
		_				0.90907 CA AAD A	diustment Factor				
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	26.608.45 Dollars				
Factors	29270 dollars										
		_				0.90907 CA AAD A	diustment Factor				
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	242.321.40 Dollars				
Factors	266560 dollars - Site Prep										
						0.90907 CA AAD A	diustment Factor				
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	5.485.32 Dollars				
Factors	6034 dollars										

Line Item SYS - Contingency And Escalation

BOE

Resources

es	S Cost Element Skill		Skill	Department		Curve	Quantity	Units	
	CON CONTINGENCY 0000		0000	NONE	ZDEPT No Department		Linear	145.321.20	Dollars
	Factors	145321 Dollars						•	
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	63.147.10	Dollars

63147.1 Dollars

Activity ID: 1AD	Description: Set 6 - Fluorination Area - Fi	nal Survey						Cost Risk 2 Schedule Risk 3						
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost		
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost				
6L30	Set 6 Final Survey	1.00	each	HC	1.770	1.770	41.147	129,469	0	170.615	14.456	185.071		
SYS Contingency And Escalation		1.00	ea	EE	0	0	0	0	31.875	31.875	0	31.875		

Total for Activity 1AD0006L30:

Line Item 6L30 - Set 6 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey

Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

WBS No: 1AAD Activity ID: 1AD0006L30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter

Starts In FY

Unit Cost - 1,943 hrs, \$131,121 subcontracts, \$11,050 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 3,348 hrs, \$225,922 subcontracts, \$19,039 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

3	Cost Element		<u>Skill</u>		Department	Curve	Quantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	329.08 Hours
Factors	362 Hours						
						0.90907 CA AAD Adiu	stment Factor
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	1.440.42 Hours
Factors	1584.5 Hours						
						0.90907 CA AAD Adiu	stment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	0.90907 CA AAD Adiu Linear	stment Factor 10.062.48 Dollars
A5C Factors	SUPPLIES 11069 Dollars	0000	NONE	KA70S	B371 Facility Disposition		
		0000	NONE	KA70S	B371 Facility Disposition		10.062.48 Dollars

Factors 131350 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

-	es	•	 -	•

es	Skill Skill			Department	Curve	<i>Ouantity</i>	Units		
	CON	CON CONTINGENCY 0000 NONE		ZDEPT	No Department	Linear	ear 21.908.25		
	Factors	21908.3 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	9.967.00	Oollars

Activity ID: 1AD0007B10 Description: Set 7 - B374 Planning & Engineering

2 Schedule Risk Cost Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
7B10	Set 7 P&E	1.00	each	НС	2.914	2.914	86.187	410.682	0	496.869	25.752	522.621
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	113.393	113.393	0	113.393
	Tot	al for Activi	ty 1AD0007I	B10:		2.914	86.187	410.682	113.393	610.262	25.752	636.014

Line Item 7B10 - Set 7 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 349 hours, \$48,865 subcontracts, \$2,818 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 601 hrs, \$84,194 subcontracts, \$4,855 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

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Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

0.90907 CA AAD Adjustment Factor

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

1AD0007B10

s	Cost Element		Skill		Department	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	2.112.68 Hours
Factors	2324 Hours						
						0.90907 CA AAD A	diustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	745.44 Hours
Factors	820 Hours						
						0.90907 CA AAD A	diustment Factor
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	55.45 Hours
Factors	61 Hours						
				,		0.90907 CA AAD A	diustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	22.394.00 Dollars
Factors	24634 Dollars						
_						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	319.135.00 Dollars
Factors	351057 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	7.156.19 Dollars
Factors	7872 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	57.753.14 Dollars
Factors	63530 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	4.243.53 Dollars

Line Item SYS - Contingency And Escalation

Factors

BOE

Resources

-									r
es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	61.314.00	Dollars
	Factors	61314 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	52.078.95	Dollars

Factors 52079 Dollars

4668

Dollars

Activity ID: 1AD0007B30 Description: Set 7 - B374 Site Support Cost Risk 1 Schedule Risk

Line Item	Description	Quantity Unit.	s BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
7B30	Set 7 Site Support	1.00 each	НС	11,376	11,376	248,021	1,541,093	0	1,789,114	72,324	1,861,438
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	397,933	397,933	0	397,933
	Tot	al for Activity 1AD0	007B30:		11.376	248.021	1.541.093	397.933	2.187.047	72,324	2,259,371

Line Item 7B30 - Set 7 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services

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WBS No: 1AAD Activity ID: 1AD0007B30

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect
WBS Filter
Activity Filter

Baseline Devl 1AAD

Starts In FY

Units

Units - 1 lot

Unit Cost - 1,351 hrs, \$181,111 subcontracts, \$12,180 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 2,328 hrs, \$312,054 subcontracts, \$20,986 supplies

Basis for adjustment - See Below:

Cost Element

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

Department

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Skill

Resources

750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	2.728.12 Hours
Factors	3001 Hours						
				_		0.90907 CA AAD Ad	ustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	7.332.55 Hours
Factors	8066 Hours						
				_		0.90907 CA AAD Ad	ustment Factor
750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	1.315.42 Hours
Factors	1447 Hours						
_				_		0.90907 CA AAD Ad	ustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	97.107.64 Dollars
Factors	106821 Dollars						
						0.90907 CA AAD Ad	ustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.401.818.00 Dollars
Factors	1542037 Dollars						
						0.90907 CA AAD Ad	ustment Factor
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	12.039.71 Dollars
Factors	13244 Dollars						
						0.90907 CA AAD Ad	ustment Factor
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	12.051.53 Dollars
Factors	13257 Dollars						
						0.90907 CA AAD Ad	ustment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	18.075.92 Dollars
Factors	19884 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	203.129.90	Dollars
	Factors	203130 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	194.802.90	Dollars

Factors 194803 Dollars

Activity ID: 1AD0007L10 Description: Set 7 - B374 - Dismantlement

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQ744EDIS	Dismantlementn - A5C only	1.00	ea	HC	0	0	0	32.094	0	32.094	0	32.094
1AQ745EDIS	Dismantlement - A5C only	1.00	ea	HC	0	0	0	48.141	0	48.141	0	48.141
Building Trades	Building Trade Crew of 8 (227d x 11crews)	2.497.00	dav	EE	0	0	0	9.806.162	0	9.806.162	0	9.806.162
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.166.547	2.166.547	0	2.166.547

5 Schedule Risk

Cost Risk

0.90907 CA AAD Adjustment Factor

Proiect Baseline Devl **Rocky Flats Closure Project** WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

Λ

Activity Filter 9.886.397

Line Item 1AQ744EDIS - Dismantlementn - A5C only

1AAD

1AD0007L10

BOE

WBS No:

Activity ID:

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data: Item - Dismantlement Units - 1 lot Unit Cost - 3,672 hrs, \$914,738.40 subcontracts, \$21,343.90 supplies 1st Unit Cost Adjustment factor - .96 Revised Unit Cost - 3,525 hrs, \$878,149 subcontracts, \$20,490 supplies Basis for adjustment - Estimated reduction associated with the elimination of PA at end of FY02 will reduce delays associated with security requirements. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 6,074 hrs, \$1,513,051 subcontracts, \$35,304 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006

- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Total for Activity 1AD0007L10:

Resource

ces		Cost Element	Skill	Department	Curve	Quantity	Units
	A5C SI	UPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	32.094.01	Dollars

35304.3 Dollars Factors

0.90907 CA AAD Adjustment Factor

Starts In FY

12.052.945

12.052.945

2.166.547

Line Item 1AQ745EDIS - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data: Item - Dismantlement Units - 1 lot Unit Cost - 5.508 hrs, \$1,372,106.70 subcontracts, \$32,015.82 supplies 1st Unit Cost Adjustment factor - .96 Revised Unit Cost - 5,288 hrs, \$1,317,222 subcontracts, \$30,735 supplies Basis for adjustment - Estimated reduction associated with the elimination of PA at end of FY02 will reduce delays associated with security requirements. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 9,111 hrs, \$2,269,574 subcontracts, \$52,956 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

6/22/00 8:38:29 PM Page 46 of 135 OFFICIAL USE ONLY WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0007L10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

Skill Resources Cost Element Department Curve A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition Linear 48.141.02 Dollars

Factors 52956.4 Dollars

0.90907 CA AAD Adjustment Factor

Starts In FY

Activity Filter

Line Item Building Trades - Building Trade Crew of 8 (227d x 11crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 11 Crews @ 8 people per crew x 227 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s			Cost Element			Skill			Department	Curve	Ouantity	Units
	A5B	CONSTR	UCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers	Linear	1.963.59	Dollars
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr			
_										0.90907 CA AAD Adi	ustment Factor	
	A5B	CONSTR	UCTION	L090	GENERA	L LABORER	KA70H	371 F	acility Disposition Steelworkers	Linear	981.79	Dollars
	Factors	2	Laborers		9	hours a day		60	\$/hr			
_										0.90907 CA AAD Adi	ustment Factor	
	A5B	CONSTR	UCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371	Facility Disposition	Linear	490.90	Dollars
	Factors	1	Foreman		9	hours a day		60	\$/hr			
_										0.90907 CA AAD Adi	ustment Factor	
	A5B	CONSTR	UCTION	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA70H	371 F	acility Disposition Steelworkers	Linear	490.90	Dollars
	Factors	1	RCT		9	hours a day		60	\$/hr			
										0.90907 CA AAD Adi	ustment Factor	

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.142.014.00	Dollars
_	Factors	1142014 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.024.533.00	Dollars

1024533 Dollars

Activity ID: 1AD0	Description: Set 7 - B374 - Decontaminat	ion						Cost Risk	4 Schedule F	tisk 4	
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
7L20	Set 7 Decontamination	1.00	each	HC	811	811	23.821	631.899	0	655.720	8.290	664.009
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	366.313	366.313	0	366.313
	Tot	Total for Activity 1AD0007L20:				811	23.821	631.899	366.313	1.022.033	8.290	1.030.323

Line Item 7L20 - Set 7 Decontamination

BOE

Historical Data Source - The costs for Decommissioning Bl23, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 2,190 hrs, \$395,071 subcontracts, \$8,350 supplies

Unit Cost Adjustment factor - 1.723

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Activity ID: 1AD0007L20

Rocky Flats Closure Proiect
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

0.90907 CA AAD Adjustment Factor

Units

Revised Unit Cost - 3,773 hrs, \$680,707 subcontracts, \$14,387 supplies Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

Department

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

750 STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	214.54 Hours
Factors 236 hours					
				0.90907 CA AAD Ad	ustment Factor
750 STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S RMRS Salaried	Linear	519.99 Hours
Factors 572 hours					
				0.90907 CA AAD Ad	ustment Factor
750 STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H 371 Complex Steelworkers	Linear	76.36 Hours
Factors 84 hours					
				0.90907 CA AAD Ad	ustment Factor
A5B CONSTRUCTION	0000	NONE	KA70S B371 Facility Disposition	Linear	497.010.70 Dollars
Factors 546725 dollars					
				0.90907 CA AAD Ad	ustment Factor
A5C SUPPLIES	0000	NONE	KA70S B371 Facility Disposition	Linear	13.078.77 Dollars
Factors 14387 dollars					
				0.90907 CA AAD Ad	ustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S B371 Facility Disposition	Linear	119.114.40 Dollars
Factors 131029 dollars - Site Prep					
				0.90907 CA AAD Ad	ustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S B371 Facility Disposition	Linear	2.695.39 Dollars
Factors 2965 dollars					

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	. Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	263.447.90	Dollars
-	Factors	263448 Dollars							
L	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	102.865.30	Dollars

Factors 102865 Dollars

Activity ID: 1AD	0007L30 Description: Set 7 - B374 - Final Survey							Cost Risk	2 Schedule R	risk 3		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
7L30	Set 7 Final Survey	1.00	each	HC	372	372	9.902	63.637	0	73.540	3.446	76.986
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	41.594	41.594	0	41.594
	To	al for Activ	itv 1AD0007	L30:		372	9.902	63.637	41.594	115.134	3.446	118.580

Line Item 7L30 - Set 7 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data:

Cost Element

WBS No: 1AAD Activity ID: 1AD0007L30

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Item - Final Survey
Units - 1 lot
Unit Cost - 955 hrs, \$64,450 subcontracts, \$5,431 supplies
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - 1,646 hrs, \$111,047 subcontracts, \$9,358 supplies
Basis for adjustment - See Below:
1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve	Ouantity	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	161.81	Hours
	_	4=0							

Factors 178 Hours

		0.90907 CA AAD Adjustment Factor					
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	210.45 Hours
Factors	231.5 Hours						

 A5C
 SUPPLIES
 0000
 NONE
 KA70S
 B371 Facility Disposition
 Linear
 4.945.79 Dollars

Factors 64562 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	29.667.93	Dollars
	Factors	29667.9 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	11.926.27	Dollars

Factors 11926.3 Dollars

Activity ID: 1AD0008B10 Description: Set 8 - Labs/Vlts/Process Planning & Engineering

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
8B10	Set 8 P&E	1.00	each	HC	807	807	23.882	113.844	0	137.726	7.803	145.529
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	33.343	33.343	0	33.343
	Tot	807	23.882	113.844	33.343	171.069	7.803	178.871				

Line Item 8B10 - Set 8 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering
Breakdown of Historical Data:

Item - Planning & Engineering
Units - 1 lot
Unit Cost - 469 hours, \$65,714 subcontracts, \$3,790 supplies
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - 808 hrs, \$113,225 subcontracts, \$6,530 supplies
Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

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Baseline Devl Proiect **Rocky Flats Closure Project** WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

- An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

1AD0008B10

6	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	585.44	Hours
Factors	644 Hours					0.00007 . 0.4 . 4.5 . 4.1		
750	CTDAIGUT TIME DAGE	G010	A DAMINUCED A TIVE A COLOT ANTO	R100S	DMDC Caladad	0.90907 CA AAD Adi		
	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R1005	RMRS Salaried	Linear	206.36	Hours
Factors	227 Hours					0.90907 CA AAD Adi	ustment Factor	
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear		Hours
Factors	•							
						0.90907 CA AAD Adi	ustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	6.208.03	Dollars
Factors	6829 Dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	88.466.03	Dollars
Factors	97315 Dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	1.983.59	Dollars
Factors	2182 Dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	16.009.61	Dollars
Factors	17611 Dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	1.176.34	Dollars
Factors	1294 Dollars							
						0.90907 CA AAD Adi	ustment Factor	

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	21,341.39	Dollars
	Factors	21341.4 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	12,001.36	Dollars

Factors 12001.4 Dollars

Activity ID: 1AD	0008B30 Description: Set 8 - Labs/Vlts/Process Si	te Support		Cost Risk 1 Schedule Risk 1							
Line Item	Description	Quantity Uni	ts BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
8B30	Set 8 Site Support	1.00 each	HC	3.154	3.154	68.754	427.197	0	495.951	22.371	518.322
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	116.608	116.608	0	116.608
	Tot	Total for Activity 1AD0008B30:						116.608	612.559	22.371	634.930

Line Item 8B30 - Set 8 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Starts In FY

WBS No: 1AAD Activity ID: 1AD0008B30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY *

Breakdown of Historical Data: Item - Support Services

Units - 1 lot

Unit Cost - 1,818 hrs, \$243,563 subcontracts, \$16,380 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,132 hrs, \$419,659 subcontracts, \$28,223 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

S Cost Element	Skill	Department	Curve	Ouantity Units
750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	756.35 Hours
Factors 832 Hours				
			0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	2.032.68 Hours
Factors 2236 Hours				
			0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	P150 TRAINERS	R100S RMRS Salaried	Linear	364.54 Hours
Factors 401 Hours				
			0.90907 CA AAD A	diustment Factor
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	26.918.44 Dollars
Factors 29611 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	388.589.70 Dollars
Factors 427459 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	E110 QUALITY CONTROL ENGINEERS	KA70S B371 Facility Disposition	Linear	3.337.19 Dollars
Factors 3671 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	E120 SAFETY ENGINEERS	KA70S B371 Facility Disposition	Linear	3.340.83 Dollars
Factors 3675 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	E130 OTHER ENGINEERS	KA70S B371 Facility Disposition	Linear	5.010.79 Dollars
Factors 5512 Dollars				

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Cost Element Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	73.649.32	Dollars
	Factors	73649.3 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	42.958.57	Dollars
	Factors	42958.6 Dollars							

Activity ID: 1AD0008L10 Description: Set 8 - Labs/Vlts/Process - Dismantlement

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		1
1AQEDIS140	Dismantlement - A5C only	1.00	ea	HC	0	0	0	597.196	0	597.196	0	597.196
Building Trades	Building Trade Crew of 8 (220d x 1crew)	220.00	dav	EE	0	0	0	863.979	0	863.979	0	863.979

Cost Risk

0.90907 CA AAD Adjustment Factor

4 Schedule Risk

WBS No: 1AAD Activity ID: 1AD0008L10

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

		Buscillio (505t ui	ia Dasis oi L	-Stilliate	Acti	vity Filter *			rts In FY *	
Steekworkers	Steelworker Crew of 15 (220d x 2crews)	440.00 dav	EE	104	45.899	972.842	0	0	972.842	314.384	1.287.227
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	629.542	629.542	0	629.542
		Total for Activity 1AD0008	3L10:		45.899	972.842	1.461.175	629.542	3.063.560	314.384	3.377.944

Line Item 1AQEDIS140 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 58,403 hrs, \$1,362,654 subcontracts, \$476,209 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 46,760 hours, \$1,090,995 subcontracts, \$381,272 supplies

Basis for adjustment -Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 80,567 hrs, \$1,879,785 subcontracts, \$656,932 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element	Skill			Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	597.196.10	Dollars

Factors 656932 Dollars

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Line Item Building Trades - Building Trade Crew of 8 (220d x 1crew)

Units - 1 Crews @ 8 people per crew x 220 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es			Cost Element			Skill			Department	Curve	Ouantity	Units
	A5B	CONSTR	UCTION	C080	PLUMB	ERS AND PIPEFITTERS	KA70H	371 Fa	cility Disposition Steelworkers	Linear	1.963.59	Dollars
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr			
_										 0.90907 CA AAD Ac	liustment Factor	
L	A5B	CONSTR	UCTION	L090	GENER	AL LABORER	KA70H	371 Fa	cility Disposition Steelworkers	Linear	981.79	Dollars
	Factors	2	Laborers		9	hours a day		60	\$/hr			
_										0.90907 CA AAD Ac	liustment Factor	
L	A5B	CONSTR	UCTION	M010	FOREM	IEN / TEAM LEADS / GROUP	KA70S	B371 F	acility Disposition	Linear	490.90	Dollars
	Factors	1	Foreman		9	hours a day		60	\$/hr			
_										0.90907 CA AAD Ac	liustment Factor	

WBS No: 1AAD Activity ID: 1AD0008L10

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

T050 RADIATION CONTROL TECHNOLIGI KA70H 371 Facility Disposition Steelworkers

Proiect Baseline Devl WBS Filter 1AAD

Activity Filter Starts In FY

Linear

Factors 1 RCT hours a day

Line Item Steekworkers - Steelworker Crew of 15 (220d x 2crews)

A5B CONSTRUCTION

0.90907 CA AAD Adjustment Factor

490.90 Dollars

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 2 Crews @ 15 people per crew x 220 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es			Cost Element			Skill		Department	Cur	rve	Ouantity	Units
	750	STRAIG	HT TIME BASE	C120	D&D SKI	LLED TRADES	KA70H	371 Facility Disposition Steelworkers	Line	ear	62.59	Hours
Fa	ctors	9	D&D Workers		7.65	hours a day						
									0.90907	CA AAD Adii	ustment Factor	

	750	STRAIGH	HT TIME BASE	M010	FOREME	N / TEAM LEA	DS / GROUP	R100S	RMRS Salaried	 Linear	6.95 Hours
I	actors	1	Foreman		7.65	hours a day					
										0.90907 CA AAD Adi	ustment Factor
	750	STRAIGH	HT TIME BASE	T050	RADIATION	ON CONTROL	TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	34.77 Hours

Factors **RCTs** 7.65 hours a day

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

Line Item

es	Cost Element Skill					Department	Curve	Ouantity	Units
Į	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	400.096.70	Dollars
	Factors	400097 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	229.445.60	Dollars

BOE

Type

HC

FF

Units

Factors 229446 Dollars

Set 8 Decontamination

Contingency And Escalation

Activity ID: 1AD0008L20 Description: Set 8 - Labs/VIts/Process - Decontamination Description

Cost Risk 4 Schedule Risk

Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Total Cost & Escalation Cost 1.094 32.108 849.780 881.889 9.055 890.943 Λ 130.254 130.254 130.254

1.012.143

9.055

1.021.197

130.254

Line Item 8L20 - Set 8 Decontamination

BOE

8L20

SYS

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Labor

Hours/Unit

1.094

Total

1.094

32.108

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 1,753 hrs, \$531,304 subcontracts, \$11,230 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,020 hrs, \$915,437 subcontracts, \$19,349 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

Quantity

1.00 each

Total for Activity 1AD0008L20:

1.00 ea

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

849.780

WBS No: 1AAD **Rocky Flats Closure Project** Activity ID: 1AD0008L20 **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY *

0.90907 CA AAD Adjustment Factor

2 Schodula Pick

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element		Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	289.99	Hours
Factors	s 319 hours							
						0.90907 CA AAD Ad	diustment Factor	
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	699.98	Hours
Factors	770 hours							
						0.90907 CA AAD Ad	diustment Factor	
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	103.63	Hours
Factors	s 114 hours							
						0.90907 CA AAD Ad	diustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	17.589.57	Dollars
Factors	s 19349 dollars							
						0.90907 CA AAD Ad	diustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	160.169.80	Dollars
Factors	176191 dollars - Site Prep							
						0.90907 CA AAD Ad	diustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	3.626.28	Dollars
Factors	s 3989 dollars							
						0.90907 CA AAD Ad	diustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	668.394.70	Dollars
Factors	735252 dollars							

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	44.709.07	Dollars
_	Factors	44709.1 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	85.545.05	Dollars
	Factors	85545.1 Dollars							

A adjustes IDs. 4 A DOCCOL 20 Description: Sot 9 | Johe // Ite/Process | Final Survey

ACTIVITY ID. TAD	Description. Set 8 - Labs/ Vits/Flocess - 1	iliai Sulve		Cost Risk 2 Schedule Risk 3								
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
8L30	Set 8 Final Survey	1.00	each	HC	516	516	13,645	85,581	0	99,226	3,848	103,074
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	14,830	14,830	0	14,830
	Tot		516	13,645	85,581	14,830	114,056	3,848	117,904			

Line Item 8L30 - Set 8 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 1,285 hrs, \$86,673 subcontracts, \$7,304 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 2,214 hrs, \$149,338 subcontracts, \$12,585 supplies

Cont Dial

WBS No: 1AAD Activity ID: 1AD0008L30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter

Baseline Devl 1AAD

Starts In FY

Quantity

Unite

Basis for adjustment - See Below:

Cost Flement

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

Department

647

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Skill

Resources

750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear 217.72	Hours
Factors 239.5 Hours				
			0.90907 CA AAD Adjustment Factor	
750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIG	I KA10H 371 Complex Steelworkers	Linear 298.63	Hours
Factors 328.5 Hours				
			0.90907 CA AAD Adjustment Factor	
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear 6.651.66	Dollars
Factors 7317 Dollars				
			0.90907 CA AAD Adjustment Factor	

					0.90907 CA AAD Adi	ustment Factor
A5H SUBCONTRACT	ED SRVS 0000	NONE	KA70S	B371 Facility Disposition	Linear	78.929.45 Dollars

Factors 86824.5 Dollars

0.90907 CA AAD Adjustment Factor

Curve

2 Caladala Diala

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department	Curve		Units	
C	ON CONTINGENCY	10N 0000	DNE	ZDEPT	No Department	Linear	4,933.36	Dollars
Fac	ors 4933.36 Dollars							
	C ESCALATION	10N 0000	DNE	ZDEPT	No Department	Linear	9,896.76	Dollars

9896.76 Dollars

1 A D0000 D10 Description: Set 9 - Ofce/Spt/Maint/Cold Lbs Planning & Engin

ACTIVITY ID. TAD	Description. Set 9 - Sice/Optiviality Cold	LUS I Idililii	g & Liigiii					Cost Risk 2 Schedule Risk 2				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
9B10	Set 9 P&E		each	НС	647	647	19.153	91.281	0	110.433	5.838	116.271
SYS	Contingency And Escalation		1.00 ea		0	0	0	0	23.084	23.084	0	23.084

Line Item 9B10 - Set 9 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering Breakdown of Historical Data: Item - Planning & Engineering

Units - 1 lot

Unit Cost - 120 hours, \$16,850 subcontracts, \$972 supplies

Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 207 hrs, \$29,033 subcontracts, \$1,675 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

Total for Activity 1AD0009B10:

- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Cont Dial.

91.281

19.153

WBS No: 1AAD Activity ID: 1AD0009B10

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter

Baseline Devl 1AAD

Starts In FY *

0.90907 CA AAD Adjustment Factor

1 Schedule Risk

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

	This estimate includes a project	productivity/efficiency factor for com	mitted but as yet undefined cost reducti	ons.	
Resources	Cost Element	Skill	Department	Curve	Ouantity Units
	750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	469.99 Hours
	Factors 517 Hours				<u>-</u> .
		T	T = = T==== =	0.90907 CA AAD Adi	
	750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	165.45 Hours
	Factors 182 Hours			0.90907 CA AAD Adi	justment Factor
	750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	11.82 Hours
	Factors 13 Hours			0.90907 CA AAD Adi	ustment Factor
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	4.977.15 Dollars
	Factors 5475 Dollars			0.90907 CA AAD Adi	ustment Factor
	A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	70.932.82 Dollars
	Factors 78028 Dollars			0.90907 CA AAD Adi	ustment Factor
	A5H SUBCONTRACTED SRVS	E050 ENVIRONMENTAL ENGINEERS	KA70S B371 Facility Disposition	Linear	1.590.87 Dollars
	Factors 1750 Dollars			0.90907 CA AAD Adi	ustment Factor
	A5H SUBCONTRACTED SRVS	E130 OTHER ENGINEERS	KA70S B371 Facility Disposition	Linear	12.836.96 Dollars
	Factors 14121 Dollars			0.90907 CA AAD Adi	
	A5H SUBCONTRACTED SRVS	G010 ADMINISTRATIVE ASSISTANTS	KA70S B371 Facility Disposition	Linear	942.70 Dollars

Line Item SYS - Contingency And Escalation

1037

Dollars

Factors

BOE

Resources

es		Cost Element Skill			Department	Curve	Quantity	Units	
_(CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	12.726.79	Dollars
Fe	actors	12726.8 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	10.357.60	Dollars

Factors 10357.6 Dollars

Activity ID:	1AD0009B30	Description: Set 9 - Ofce/Spt/Maint/Cold Lbs Site Suppo
--------------	------------	---

, tour tity 1.2 1 17 12	Description Co. C.	Contract Con										
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
9B30	Set 9 Site Support	1.00	each	HC	2.529	2.529	55.138	342.535	0	397.673	16.053	413.726
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	73.646	73.646	0	73.646
Total for Activity 1AD0009B30:						2.529	55.138	342.535	73.646	471.319	16.053	487.372

Line Item 9B30 - Set 9 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services
Units - 1 lot

Unit Cost - 466 hrs, \$62,452 subcontracts, \$4,200 supplies

Unit Cost Adjustment factor - 1.723

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Cost Risk

WBS No: 1AAD
Activity ID: 1AD0009B30

Rocky Flats Closure Project
WBS Filter
Baseline Cost and Basis of Estimate

Revised Unit Cost - 803 hrs, \$107,605 subcontracts, \$7,237 supplies
Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

750 STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	606.35 Hours
Factors 667 Hours						
					0.90907 CA AAD Ad	liustment Factor
750 STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	1.629.96 Hours
Factors 1793 Hours						
					0.90907 CA AAD Ad	liustment Factor
750 STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	292.72 Hours
Factors 322 Hours						
					0.90907 CA AAD Ad	liustment Factor
A5C SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	21.584.02 Dollars
Factors 23743 Dollars						
					0.90907 CA AAD Ad	liustment Factor
A5H SUBCONTRACTED SRV	3 0000	NONE	KA70S	B371 Facility Disposition	Linear	311.577.90 Dollars
Factors 342744 Dollars						
					0.90907 CA AAD A	liustment Factor
A5H SUBCONTRACTED SRV	S E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	2.676.30 Dollars
Factors 2944 Dollars						
					0.90907 CA AAD A	liustment Factor
A5H SUBCONTRACTED SRV	S E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	2.679.03 Dollars
Factors 2947 Dollars						
					0.90907 CA AAD Ad	ljustment Factor
A5H SUBCONTRACTED SRV	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	4,018.08 Dollars
Factors 4420 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element Skill			Department	Curve	Ouantity	Units		
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	35.072.57	Dollars
	Factors	35072.6 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	38.573.55	Dollars

Factors 38573.6 Dollars

Activity ID: 1AD0009L10 Description: Set 9 - Ofce/Spt/Maint/Cold Lbs - Dismantlement

(Cost Risk	2	Schedule Risk	3

0.90907 CA AAD Adjustment Factor

Baseline Devl

Starts In FY

Units

1AAD

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS230	Dismantlement - A5C only	1.00	ea	HC	0	0	0	173.104	0	173.104	0	173.104
Building Trades	Building Trade Crew of 8 (185d x 3crews)	555.00	dav	EE	0	0	0	2.179.583	0	2.179.583	0	2.179.583
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	423.948	423.948	0	423.948
Total for Activity 1AD00091 10:							0	2 352 687	423 948	2 776 635	0	2 776 635

Line Item 1AQEDIS230 - Dismantlement - A5C only

BOE Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of

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WBS No: 1AAD *Activity ID:* 1AD0009L10

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

Activity Filter * Starts In FY *

gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 16,929 hrs, \$394,979 subcontracts, \$138,034 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 13,554 hours, \$316,236 subcontracts, \$110,516 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 23,353 hrs, \$544,875 subcontracts, \$190,419 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

S Cost Element			Skill	Department	Curve	Quantity	Units
	A5C SUPPLIES	0000 NONE		KA70S B371 Facility Disposition	Linear	173.104.10	Dollars

Factors 190419 Dollars

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (185d x 3crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 3 Crews @ 8 people per crew x 185 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s		Cost Element	Skill					Department	Curve	Quantity	Units
	A5B	CONSTRUCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 Fa	acility Disposition Steelworkers	Linear	1.963.59	Dollars
F	actors	4 Pipe Fitters		9	hours a day		60	\$/hr			
_		<u>, </u>							0.90907 CA AAD Adiu	ustment Factor	
	A5B	CONSTRUCTION	L090	GENERA	L LABORER	KA70H	371 Fa	acility Disposition Steelworkers	Linear	981.79	Dollars
F	actors	2 Laborers		9	hours a day		60	\$/hr			
_									0.90907 CA AAD Adiu	ustment Factor	
	A5B	CONSTRUCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371 I	Facility Disposition	Linear	490.90	Dollars
F	actors	1 Foreman		9	hours a day		60	\$/hr			
_									0.90907 CA AAD Adiu	ustment Factor	
	A5B	CONSTRUCTION	T050	RADIATION	ON CONTROL TECHNOLIGI	KA70H	371 Fa	acility Disposition Steelworkers	Linear	490.90	Dollars
F	actors	1 RCT		9	hours a day		60	\$/hr			

Line Item SYS - Contingency And Escalation

BOE

WBS No: 1AAD Activity ID: 1AD0009L10

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Baseline Devl

2 Caladala Diala

WBS Filter 1AAD
Activity Filter *

Cont Dial

Resources	Cost Element	Sk	all	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT	No Department	Linear	205.032.40	Dollars
	Factors 205032 Dollars						
	ESC ESCALATION	0000 NONE	ZDEPT	No Department	Linear	218.915.60	Dollars
	•		•	*			

Factors 218916 Dollars

Activity ID. TADOUGLES - Decontamination										isk 3		
Line Item	ine Item Description		Quantity Units		Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
9L20	Set 9 Decontamination	1.00	each	HC	163	163	4.783	84.991	0	89.773	1.390	91.163
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	19.139	19.139	0	19.139
	163	4.783	84.991	19.139	108.913	1.390	110.302					

Line Item 9L20 - Set 9 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 449 hrs, \$136,232 subcontracts, \$2,879 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 774 hrs, \$234,728 subcontracts, \$4,961 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%

Description, Set 0. Ofco/Spt/Maint/Cold I be Decenterination

- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

s	Cost Element		Skill		Department	Curve	Quantity	Units	
750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	42.73	Hours	
Factors	47 hours								
						0.90907 CA AAD A	diustment Factor		
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	104.54	Hours	
Factors	115 hours								
						0.90907 CA AAD A	diustment Factor		
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	15.45	Hours	
Factors	17 hours								
_						0.90907 CA AAD A	Adjustment Factor		
A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	57.996.77	Dollars	
Factors	63798 dollars								
						0.90907 CA AAD A	diustment Factor		
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	2.617.21	Dollars	
Factors	2879 dollars								
						0.90907 CA AAD A	diustment Factor		
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	539.99	Dollars	
Factors	594 dollars								
						0.90907 CA AAD A	djustment Factor		

WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0009L20 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

Ouantity

Units

BOE

Type

Starts In FY A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 23.836.69 Dollars Linear

Factors 26221 dollars - Site prep

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

Resources

Line Item

es	Cost Element	Skill	Department	Curve	Ouantity Units
CC	ON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	9.688.07 Dollars
Fact	ors 9688.07 Dollars				
ES		0000 NONE	ZDEPT No Department	Linear	9.451.28 Dollars

Factors 9451.28 Dollars

Set 9 Final Survey

Contingency And Escalation

Activity ID: 1AD0009L30 Description: Set 9-Ofce/Spt/Maint/Cold Lbs - Final Survey Description

Cost Risk 2 Schedule Risk

Contingency

& Escalation

Materials/ Sub

Cost

3		
otal Prime Cost	Burden Cost	Total Cost

Total HC 300 1.00 each 300 6.977 21.944 28 921 2 428 1.00 ea EE 0 16.937 16.937 16.937 Total for Activity 1AD0009L30: 300 6.977 21.944 16.937 45.858 2.428 48.286

Labor Cost

Line Item 9L30 - Set 9 Final Survey

BOE

9L30

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Labor

Hours/Unit

Labor Hours

Total

Item Desc - Decommissioning Final Survey

Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 329 hrs, \$22,224 subcontracts, \$1,873 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 568 hrs, \$38,292 subcontracts, \$3,227 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element		Skill		Department	Curve	<i>Ouantity</i> l	Units	
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	55.91 Ho	ours	
Factors	61.5 Hours								
	0.90907 CA AAD Adjustment Factor								
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	244.08 Ho	ours	
Factors	268.5 Hours								
						0.90907 CA AAD Adjustment Factor			
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.705.41 Do	llars	
Factors	1876 Dollars								
						0.90907 CA AAD Adiu	stment Factor		
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	20.238.14 Do	ollars	

Factors 22262.5 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

WBS No: 1AAD
Activity ID: 1AD0009L30

Rocky Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl
WBS Filter 1AAD
Activity Filter *

Starts In FY

Ouantito

es	Cost Element			Skill		Department Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	12.080.97	Dollars
1	Factors	12081 Dollars	- ' 						
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	4.856.45	Dollars

Factors 4856.45 Dollars

Activity ID: 1AD0010B10 Description: Set 10 - PuSPS/Rm 3701 Planning & Engineering Cost Risk 2 Schedule Risk 2 BOE Materials/ Sub Total Prime Line Item Description Quantity Units Labor Labor Hours Labor Cost Contingency Burden Cost Total Cost TypeHours/Unit Total **Total** Cost & Escalation Cost 10B10 Set 10 P&E HC 515 515 15.216 72.466 87.683 4.959 92.642 1.00 each Λ

> 1.00 lea | EE | 0 0 0 0 21.122 21.122 0 21.122 Total for Activity 1AD0010B10: 515 15.216 72.466 21.122 108.804 4.959 113.764

Line Item 10B10 - Set 10 P&E

BOE

SYS

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Contingency And Escalation

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 829 hours, \$116,264 subcontracts, \$6,705 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 1,428 hrs, \$200,323 subcontracts, \$11,553 supplies

Basis for adjustment - See Below:

Cost Floment

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

CI-:11

Cost Etement		SKIII		Debarimeni	Curve	Quantity Units
STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	372.72 Hours
410 Hours						
					0.90907 CA AAD Adi	ustment Factor
STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	131.81 Hours
145 Hours						
					0.90907 CA AAD Adi	ustment Factor
STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	10.00 Hours
11 Hours						
					0.90907 CA AAD Adi	ustment Factor
SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	3.951.72 Dollars
4347 Dollars						
					0.90907 CA AAD Adi	ustment Factor
SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	56.312.27 Dollars
61945 Dollars						
					0.90907 CA AAD Adi	ustment Factor
SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	1.262.70 Dollars
1389 Dollars						
					0.90907 CA AAD Adi	ustment Factor
	STRAIGHT TIME BASE 410 Hours STRAIGHT TIME BASE 145 Hours STRAIGHT TIME BASE 11 Hours SUPPLIES 4347 Dollars SUBCONTRACTED SRVS 61945 Dollars SUBCONTRACTED SRVS	STRAIGHT TIME BASE	STRAIGHT TIME BASE	STRAIGHT TIME BASE E130 OTHER ENGINEERS R100S 410 Hours G010 ADMINISTRATIVE ASSISTANTS R100S 145 Hours Hours FOREMEN / TEAM LEADS / GROUP R100S 11 Hours Hours KA70S SUPPLIES 0000 NONE KA70S 4347 Dollars SUBCONTRACTED SRVS 0000 NONE KA70S SUBCONTRACTED SRVS E050 ENVIRONMENTAL ENGINEERS KA70S	STRAIGHT TIME BASE E130 OTHER ENGINEERS R100S RMRS Salaried 410 Hours STRAIGHT TIME BASE G010 ADMINISTRATIVE ASSISTANTS R100S RMRS Salaried 145 Hours Hours M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 11 Hours Hours KA70S B371 Facility Disposition SUPPLIES 0000 NONE KA70S B371 Facility Disposition SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition SUBCONTRACTED SRVS E050 ENVIRONMENTAL ENGINEERS KA70S B371 Facility Disposition	STRAIGHT TIME BASE

WBS No: Baseline Devl 1AAD Proiect **Rocky Flats Closure Project** Activity ID: 1AD0010B10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

	A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	10.190.66 Dollars
F	actors	11210 Dollars						
							0.90907 CA AAD Adiu	ustment Factor
	Δ5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	KA709	R371 Facility Disposition	Linear	749 07 Dollars

824 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

s	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	13.459.42	Dollars
Factors	Factors 13459.4 Dollars							
FSC		0000	NONE	7DFPT	No Department	Linear	7.662.38	Dollars

Factors 7662.38 Dollars

Activity ID: 1AD0010B30 Description: Set 10 - PuSPS/Rm 3701 Site Support Cost Risk 1 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
10B30	Set 10 Site Support	1.00 each		НС	2.006	2.006	43.736	271.932	0	315.667	13.274	328.942
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	64.151	64.151	0	64.151
	Tot	Total for Activity 1AD0010B30:				2.006	43.736	271.932	64.151	379.819	13.274	393.093

Line Item 10B30 - Set 10 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 3,215 hrs, \$430,918 subcontracts, \$28,979 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 5,539 hrs, \$742,472 subcontracts, \$49,931 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	480.90	Hours
	Factors	529 Hours							
r				,			0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	1.293.60	Hours
	Factors	1423 Hours							
							0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	231.81	Hours
	Factors	255 Hours							
-							0.90907 CA AAD Adiu	stment Factor	
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	17.135.04	Dollars
	Factors	18849 Dollars							
_							0.90907 CA AAD Adiu	stment Factor	

WBS No: Baseline Devl 1AAD Proiect **Rocky Flats Closure Project** Activity ID: 1AD0010B30 WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

						Activity Filter	*	Starts In FY *
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Linear	247.355.80 Dollars
Factors	272098 Dollars							
							0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition		Linear	2.124.49 Dollars
Factors	2337 Dollars							
							0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition		Linear	2.126.31 Dollars
Factors	2339 Dollars							
							0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition		Linear	3.189.92 Dollars

Factors 3509 Dollars

Line Item SYS - Contingency And Escalation

BOE

Resources

Skill Skill			Skill		Department	Curve	Quantity	Units	
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	34.716.29	Dollars
1	Factors	34716.3 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	29.434.72	Dollars

Factors 29434.7 Dollars

Activity ID: 1AD0010L10

Description: Set 10 - PuSPS/Rm 3701- Dismantlement

	Cost Risk	4	Scheaule K	ilsk 4	
·Cost	Materials/ Sub	Co	ntingency	Total Prime	Bı

4 C.L. L.L. D.L.

0.90907 CA AAD Adjustment Factor

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS180	Dismantlement - A5C	1.00	ea	HC	0	0	0	11.412	0	11.412	0	11.412
Building Trades	Building Trade Crew of 8 (150d x 2crews)	300.00	dav	EE	0	0	0	1.178.153	0	1.178.153	0	1.178.153
Steekworkers	Steelworker Crew of 15 (132d x 1crew)	132.00	dav	EE	104	13.770	291.853	0	0	291.853	88.126	379.979
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	310.794	310.794	0	310.794
	Total for Activity 1AD0010L10:					13.770	291.853	1.189.565	310.794	1.792.212	88.126	1.880.338

Line Item 1AQEDIS180 - Dismantlement - A5C

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the

historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 1,116 hrs, \$26,039 subcontracts, \$9,100 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 894 hours, \$20,848 subcontracts, \$7,286 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 1,540 hrs, \$35,921 subcontracts, \$12,554 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006

to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

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Baseline Cost and Basis of Estimate WBS Filter 1AAD

Baseline Cost and Basis of Estimate

**BS Filter TAAD

Activity Filter **

Resources	Cost Element		Skill	Department	Curve	Ouantity	Units
	A5C SUPPLIES	0000	NONE	KA70S B371 Facility Disposition	Linear	11.412.25	Dollars
				*			

Factors 12553.8 Dollars

1AAD

1AD0010L10

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Starts In FY

Line Item Building Trades - Building Trade Crew of 8 (150d x 2crews)

BOE

WBS No:

Activity ID:

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 2 Crews @ 8 people per crew x 150 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

									_			
s _		Cost Element		1	Skill		_	Department	Cı	ırve	Ouantity	Units
	A5B	CONSTRUCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers	Lir	near	1.963.59	Dollars
F	actors	4 Pipe Fitters		9	hours a day		60	\$/hr				
_									0.90907	CA AAD Adi	ustment Factor	
	A5B	CONSTRUCTION	L090	GENERA	L LABORER	KA70H	371 F	acility Disposition Steelworkers	Lir	near	981.79	Dollars
F	actors	2 Laborers		9	hours a day		60	\$/hr				
_									0.90907	CA AAD Adi	ustment Factor	
	A5B	CONSTRUCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371	Facility Disposition	Lir	near	490.90	Dollars
F	actors	1 Foreman		9	hours a day		60	\$/hr				
									0.90907	CA AAD Adi	ustment Factor	
L	A5B	CONSTRUCTION	T050	RADIATION	ON CONTROL TECHNOLIGI	KA70H	371 F	acility Disposition Steelworkers	Lir	near	490.90	Dollars
F	actors	1 RCT		9	hours a day		60	\$/hr				

Line Item Steekworkers - Steelworker Crew of 15 (132d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 15 people per crew x 132 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

,	Cost Element	Skill	Department	Curve	Quantity Units
	750 STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	62.59 Hours
	Factors 9 D&D Workers	7.65 hours a day			
				0.90907 CA AAD Adi	ustment Factor
	750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	6.95 Hours
	Factors 1 Foreman	7.65 hours a day			
				0.90907 CA AAD Adi	ustment Factor
	750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIGI	KA10H 371 Complex Steelworkers	Linear	34.77 Hours
	Factors 5 RCTs	7.65 hours a day			

0.90907 CA AAD Adjustment Factor

WBS No: 1AAD Activity ID: 1AD0010L10

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	169.629.80 Dollars
	Factors 169630 Dollars				
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	141.164.40 Dollars

Factors 141164 Dollars

Activity ID: 1AD0010L20 Description: Set 10 - PuSPS/Rm 3701- Decontamination Cost Risk										Pisk 4		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
10L20	Set 10 Decontamination		1.00 each HC		1.933	1.933	56.746	594.403	0	651.149	16.002	667.151
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	97.536	97.536	0	97.536
	Tota			I for Activity 1AD0010L20: 1.933 56				594.403	97.536	748.685	16.002	764.688

Line Item 10L20 - Set 10 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 3,101 hrs, \$1,125,020 subcontracts, \$19,868 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 5,343 hrs, \$1,938,410 subcontracts, \$34,233 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

;	Cost Element		Skill		<u>Department</u>	Curve	Ouantity Units
750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	511.81 Hours
Factors	563 hours						
_						0.90907 CA AAD Ad	diustment Factor
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	1.237.24 Hours
Factors	1361 hours						
					_	0.90907 CA AAD Ad	diustment Factor
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	183.63 Hours
Factors	202 hours						
						0.90907 CA AAD Ad	diustment Factor
A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	273.476.10 Dollars
Factors	300831 dollars						
						0.90907 CA AAD Ad	diustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	31.120.15 Dollars
Factors	34233 dollars						
						0.90907 CA AAD Ad	diustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	6.415.30 Dollars
Factors							

0.90907 CA AAD Adjustment Factor

WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0010L20 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 283.391.30 Dollars Linear

Factors 311738 dollars - Site Prep

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill		Department	Curve	Quantity	Units
	ON CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	33.478.81	Dollars
Fa	ctors 33478.8 Dollars							
F	SC ESCALATION	0000	NONE	7DFPT	No Department	Linear	64 057 39	Dollars

Factors 64057.4 Dollars

Description: Set 10 - PuSPS/Rm 3701- Final Survey Activity ID: 1AD0010L30

Cost Risk 2 Schedule Risk

Starts In FY

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
10L30	Set 10 Final Survey	1.00	each	HC	389	389	10.707	40.837	0	51.544	3.019	54.564
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	7.851	7.851	0	7.851
Total for Activity 1AD0010L30:							10.707	40.837	7.851	59.395	3.019	62.414

Line Item 10L30 - Set 10 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 2,273 hrs, \$153,345 subcontracts, \$12,922 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,916 hrs, \$264,214 subcontracts, \$22,265 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	196.36	Hours
Factors	216 Hours							
						0.90907 CA AAD Adiu	stment Factor	
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	192.27	Hours
Factors	211.5 Hours							
						0.90907 CA AAD Adiu	stment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	4.522.62	Dollars
Factors	4975 Dollars							
						0.90907 CA AAD Adiu	stment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	36.314.57	Dollars

Factors 39947 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

WBS No: 1AAD **Rocky Flats Closure Project** Activity ID: 1AD0010L30 **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

2 790

Starts In FY

Resources	ı
	Г

es	Cost Element Skill					Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.611.55	Dollars
F	actors	2611.55 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	5.238.99	Dollars

Factors 5238.99 Dollars

ACTIVITY ID: 1AD	Description: Set 11 - Vault/Drum Strge P	Plannning & Engineerin Cost Risk 2 Schedule Risk 2										
Line Item	Line Item Description			BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
11B10	Set 11 P&E	1.00	each	НС	95	95	2.790	13.335	0	16.125	965	17.091
SYS	SYS Contingency And Escalation			EE	0	0	0	0	4.786	4.786	0	4.786

Line Item 11B10 - Set 11 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 12 hours, \$1,685 subcontracts, \$97 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 21 hrs, \$2,903 subcontracts, \$167 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

Total for Activity 1AD0011B10:

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

3	Cost Element		Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	68.18	Hours
Factors	75 Hours							
						0.90907 CA AAD Ad	diustment Factor	
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	24.54	Hours
Factors	27 Hours							
						0.90907 CA AAD Ad	diustment Factor	
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1.82	Hours
Factors	2 Hours							
						0.90907 CA AAD Ad	diustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	727.26	Dollars
Factors	800 Dollars							
						0.90907 CA AAD Ad	diustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	10.361.57	Dollars
Factors	11398 Dollars							
						0.90907 CA AAD Ad	diustment Factor	
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	232.72	Dollars
Factors	256 Dollars							
	-					0.90907 CA AAD Ad	djustment Factor	

WBS No: Baseline Devl 1AAD Proiect **Rocky Flats Closure Project** Activity ID: 1AD0011B10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

G010 ADMINISTRATIVE ASSISTANTS

A5H	SUBCONT	TRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	1.875.41 Do	ollars
Factors	2063	Dollars							
							0.90907 CA AAD Adiu	stment Factor	

KA70S B371 Facility Disposition

Dollars

SUBCONTRACTED SRVS

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3.475.21	Dollars
1	Factors	3475.21 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.310.62	Dollars

1310.62 Dollars

Activity ID: 1AD0011B30 Description: Set 11 - Vault/Drum Strge Site Support Cost Risk 1 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
11B30	Set 11 Site Support	1.00	each	HC	369	369	8.041	50.035	0	58.076	2.782	60.859
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	16.873	16.873	0	16.873
	Tot	369	8.041	50.035	16.873	74.949	2.782	77.732				

Line Item 11B30 - Set 11 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 46 hrs, \$6,245 subcontracts, \$420 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 79 hrs, \$10,760 subcontracts, \$724 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

es				Skill		Department	Curve	<i>Ouantity</i>	Units
L	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	88.18	Hours
	Factors	97 Hours							
г						1	0.90907 CA AAD Adiu	stment Factor	
Į	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	238.18	Hours
	Factors	262 Hours							
							0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	42.73	Hours
	Factors	47 Hours							
-							0.90907 CA AAD Adiu	stment Factor	
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	3.152.65	Oollars
	Factors	3468 Dollars							
_							0.90907 CA AAD Adiu	stment Factor	

 WBS No:
 1AAD
 Rocky Flats Closure Project
 Project
 Baseline Devl

 Activity ID:
 1AD0011B30
 Baseline Cost and Basis of Estimate
 WBS Filter
 1AAD

			of Estimate	Activity Filter	*	Starts In FY *		
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Linear	45.513.44 Dollars
Factors	50066 Dollars							
							0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition		Linear	390.90 Dollars
Factors	430 Dollars							
							0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition		Linear	390.90 Dollars
Factors	430 Dollars							
							0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition		Linear	587.26 Dollars

Factors 646 Dollars

Line Item SYS - Contingency And Escalation

BOE

Resources

Line Item

1AQEDIS190

Steekworkers

Building Trades

es		Cost Element	Skill			Department	Curve	Quantity	Units
C	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	12.205.92	Dollars
Fa	ctors	12205.9 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	4.666.97	Dollars

Labor

Hours/Unit

0

0

0

104

Labor Hours

Total

0

0

0

2.086

2.086

Labor Cost

Total

0

0

44.220

44.220

Factors 4666.97 Dollars

Dismantlement - A5C only

Contingency And Escalation

Building Trade Crew of 8 (60d x 1crew)

Steelworker Crew of 15 (20d x 1crew)

Activity ID: 1AD0011L10

Description: Set 11 - Vault/Drum Strge - Dismantlement

Ouantity

1.00 ea

60.00 day

20.00 day

1.00 ea

Total for Activity 1AD0011L10:

Units

BOE

Type

HC

EE

EE

FF

Cost Risk 4 Schedule Risk

101.722

Materials/ Sub

Cost

60.623

0

0

235.631

296.254

1

442.196

0.90907 CA AAD Adjustment Factor

4 Schedule R	isk 4		
Contingency	Total Prime	Burden Cost	Total Cost
& Escalation	Cost		
0	60.623	0	60.623
0	235.631	0	235.631
0	44.220	15.300	59.520
101.722	101.722	0	101.722

15.300

Line Item 1AQEDIS190 - Dismantlement - A5C only

BOE

SYS

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Description

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 5,929 hrs, \$138.326 subcontracts, \$48,341 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 4,747 hours, \$110,749 subcontracts, \$38,704 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 8,179 hrs, \$190,821 subcontracts, \$66,687 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources Cost Element Skill Department Curve	Ouantity Units	1
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WBS No: 1AAD
Rocky Flats Closure Project Baseline Devl
Activity ID: 1AD0011L10
Rocky Flats Closure Project WBS Filter
Baseline Cost and Basis of Estimate
1AAD

A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition Linear 60.623.07 Dollars

Factors 66687 Dollars

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Starts In FY

Activity Filter

Line Item Building Trades - Building Trade Crew of 8 (60d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 8 people per crew x 60 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es			Cost Element			Skill			Department	Curr	ve	Ouantity	Units
	A5B	CONSTRU	JCTION	C080	PLUMBER	S AND PIPEFITTERS	KA70H	371 Fa	cility Disposition Steelworkers	Line	ar	1.963.59	Dollars
F	actors	4	Pipe Fitters		9	hours a day		60	\$/hr				
										0.90907 (CA AAD Adiu	stment Factor	
	A5B	CONSTRU	JCTION	L090	GENERAL	LABORER	KA70H	371 Fa	cility Disposition Steelworkers	Line	ar	981.79	Dollars
F	actors	2	Laborers		9	hours a day		60	\$/hr				
										0.90907 (CA AAD Adiu	stment Factor	
	A5B	CONSTRU	JCTION	M010	FOREMEN	I / TEAM LEADS / GROUP	KA70S	B371 F	acility Disposition	Line	ar	490.90	Dollars
F	actors	1	Foreman		9	hours a day		60	\$/hr				
										0.90907 (CA AAD Adiu	stment Factor	
	A5B	CONSTRU	JCTION	T050	RADIATIO	N CONTROL TECHNOLIGI	KA70H	371 Fa	cility Disposition Steelworkers	Line	ar	490.90	Dollars
F	actors	1	RCT		9	hours a day		60	\$/hr				

Line Item Steekworkers - Steelworker Crew of 15 (20d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 15 people per crew x 20 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element	Skill	Department	Curve	Quantity Units
	750 STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	62.59 Hours
	Factors 9 D&D Workers	7.65 hours a day			
				0.90907 CA AAD Adi	ustment Factor
	750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	6.95 Hours
	Factors 1 Foreman	7.65 hours a day			
				0.90907 CA AAD Adi	ustment Factor
	750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIG	KA10H 371 Complex Steelworkers	Linear	34.77 Hours
	Factors 5 RCTs	7.65 hours a day			

Line Item SYS - Contingency And Escalation

BOE

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WBS No: 1AAD
Activity ID: 1AD0011L10

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Resou	rces
-------	------

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	74.439.75	Dollars
	Factors	74439.8 Dollars	='			·			·
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	27.282.62	Dollars

Factors 27282.6 Dollars

Activity ID: 1AD	Description: Set 11 - Vault/Drum Strge - I	Decontamii	nation					Cost Risk	4 Schedule R	Risk 4		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
11L20	Set 11 Decontamination	1.00	each	HC	28	28	817	21.789	0	22.606	263	22.869
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	5.197	5.197	0	5.197
	Tot	al for Activ	ity 1AD0011	L20:		28	817	21.789	5.197	27.803	263	28.066

Line Item 11L20 - Set 11 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 45 hrs, \$13,623 subcontracts, \$288 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 78 hrs, \$23,472 subcontracts, \$496 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Cost Element		Skill		Department	Curve	Ouantity Units
STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	8.18 Hours
ors 9 hours						
					0.90907 CA AAD A	diustment Factor
STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	17.27 Hours
rs 19 hours						
					0.90907 CA AAD A	diustment Factor
STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	2.73 Hours
rs 3 hours						
					0.90907 CA AAD A	diustment Factor
B CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	17.138.67 Dollars
rs 18853 dollars						
					0.90907 CA AAD A	diustment Factor
SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	450.90 Dollars
rs 496 dollars						
					0.90907 CA AAD A	diustment Factor
H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	4.106.26 Dollars
rs 4517 dollars - Site Prep						
					0.90907 CA AAD A	djustment Factor
	O STRAIGHT TIME BASE OFF 9 hours O STRAIGHT TIME BASE OFF 19 hours O STRAIGHT TIME BASE OFF 3 hours B CONSTRUCTION OFF 18853 dollars C SUPPLIES OFF 496 dollars H SUBCONTRACTED SRVS	0 STRAIGHT TIME BASE C120 0 STRAIGHT TIME BASE E130 0 STRAIGHT TIME BASE E130 0 STRAIGHT TIME BASE T050 0 STRAIGHT TIME BA	STRAIGHT TIME BASE	STRAIGHT TIME BASE	STRAIGHT TIME BASE hours O STRAIGHT TIME BASE hours O STRAIGHT TIME BASE 130 OTHER ENGINEERS R100S RMRS Salaried O STRAIGHT TIME BASE 19 hours O STRAIGHT TIME BASE 1050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers O STRAIGHT TIME BASE 1050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers O STRAIGHT TIME BASE 1050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers O STRAIGHT TIME BASE 1050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers O STRAIGHT TIME BASE 1050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers O STRAIGHT TIME BASE 1050 RMRS Salaried O STRAIGHT TIME BASE 1050 RMR	STRAIGHT TIME BASE

WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0011L20 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

Starts In FY SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 92.73 Dollars Linear

Factors 102 dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3.279.75	Dollars
j	Factors	3279.75 Dollars							
	ESC	ESCALATION	0000	NONE	7DEPT	No Department	Linear	1 917 67	Dollars

Factors 1917.68 Dollars

Activity ID: 1AD0011I 30 Description: Set 11 - Vault/Drum Strge - Final Survey Cost Risk 2 Schedule Risk

ACTIVITY ID. IAD	Bescription. Oct 11 Vadiv Brain Origo 1	iliai Galve	Y					Cost Risk Z Schedille Risk Z				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
11L30	Set 11 Final Survey	1.00	each	HC	30	30	696	2.194	0	2.890	196	3.087
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	444	444	0	444
	Tot	al for Activi	ity 1AD0011	L30:		30	696	2.194	444	3.334	196	3.531

Line Item 11L30 - Set 11 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 33 hrs, \$2,223 subcontracts, \$187 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 57 hrs, \$3,830 subcontracts, \$323 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

S	Cost Element		Skill		<u>Department</u>	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	5.45	Hours
Factors	6 Hours							
						0.90907 CA AAD Adiu	ustment Factor	
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	24.54	Hours
Factors	27 Hours							
						0.90907 CA AAD Adig	ustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	170.45	Dollars
Factors	187.5 Dollars							
						0.90907 CA AAD Adig	ustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	2.024.04	Dollars

Factors 2226.5 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

 WBS No:
 1AAD

 Activity ID:
 1AD0011L30

 Rockv Flats Closure Project
 Project

 WBS Filter
 WBS Filter

 Baseline Cost and Basis of Estimate

Resources Cost Element Skill Department Con Contingency 0000 None ZDEPT No Department Linear 147.73 Dollars

 Factors
 147.734 Dollars

 ESC ESCALATION
 0000 NONE
 ZDEPT No Department
 Linear
 296.37 Dollars

Factors 296.367 Dollars

Activity ID: 1AI	Description: Set 12 - Halls/Stairs/MCC F	lanning & Engineerin (Cost Risk 2 Schedule Risk 2				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
12B10	Set 12 P&E	1.00	each	HC	770	770	22.773	108.550	0	131.323	7.260	138.583
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	49.022	49.022	0	49.022
	Tot	al for Activi	itv 1AD0012	B10:		770	22.773	108.550	49.022	180.345	7.260	187.605

Line Item 12B10 - Set 12 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 48 hours, \$6,740 subcontracts, \$389 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 83 hrs, \$11,613 subcontracts, \$670 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element		Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	558.17	Hours
Factor	s 614 Hours							
						0.90907 CA AAD Adi	ustment Factor	
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	197.27	Hours
Factor	s 217 Hours							
						0.90907 CA AAD Adi	ustment Factor	
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	14.55	Hours
Factor	s 16 Hours							
						0.90907 CA AAD Adi	ustment Factor	
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	5.918.95	Dollars
Factor	6511 Dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	84.352.49	Dollars
Factor	92790 Dollars							
						0.90907 CA AAD Adi	ustment Factor	
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	1.891.77	Oollars
Factor	s 2081 Dollars							
						0.90907 CA AAD Adj	ustment Factor	

Baseline Devl

1AAD

WBS No: Baseline Devl 1AAD Proiect **Rocky Flats Closure Project** Activity ID: 1AD0012B10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

G010 ADMINISTRATIVE ASSISTANTS

A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	15.265.08 D	Oollars
Factors	16792 Dollars							

KA70S B371 Facility Disposition

1234 Dollars Factors

A5H SUBCONTRACTED SRVS

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Linear

1.121.79 Dollars

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
L	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	31.143.31	Dollars
	Factors	31143.3 Dollars							
ĺ	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	17.878.40	Dollars

17878.4 Dollars

Activity ID: 1AD0012B30 Description: Set 12 - Halls/Stairs/MCC Site Support Cost Risk 1 Schedule Risk

ACCUPACY ID. 17 (D.	Description Cot 12 Trailo, Stairo, Wice C	no Cappon						COST TUSIC	. Someanie I	1070		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
12B30	Set 12 Site Support	1.00	each	HC	3.007	3.007	65.562	407.338	0	472.900	21.861	494.761
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	209.341	209.341	0	209.341
	Tot	al for Activi	ty 1AD0012	B30:		3.007	65.562	407.338	209.341	682.241	21.861	704.102

Line Item 12B30 - Set 12 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 186 hrs, \$24,980 subcontracts, \$1,680 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 320 hrs, \$43,041 subcontracts, \$2,895 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	720.89	Hours
	Factors	793 Hours							
					,		0.90907 CA AAD Adiu	stment Factor	
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	1.938.13	Hours
	Factors	2132 Hours							
							0.90907 CA AAD Adiu	stment Factor	
	750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	348.17	Hours
	Factors	383 Hours							
							0.90907 CA AAD Adiu	stment Factor	
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	25.667.56	Dollars
	Factors	28235 Dollars							
							0.90907 CA AAD Adiu	stment Factor	

WBS No: 1AAD Baseline Devl Proiect Rocky Flats Closure Project Activity ID: 1AD0012B30 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition Linear Factors 407587 Dollars 0.90907 CA AAD Adjustment Factor

E110 QUALITY CONTROL ENGINEERS

3501 Dollars Factors 0.90907 CA AAD Adjustment Factor KA70S B371 Facility Disposition E120 SAFETY ENGINEERS 3.185.38 Dollars A5H SUBCONTRACTED SRVS Linear

KA70S B371 Facility Disposition

3504 Dollars Factors

A5H SUBCONTRACTED SRVS

0.90907 CA AAD Adjustment Factor SUBCONTRACTED SRVS E130 OTHER ENGINEERS KA70S B371 Facility Disposition Linear 4.778.07 Dollars

5256 Dollars Factors

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill		Department	Curve	Quantity	Units
	CON CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	139.078.70	Dollars
F	actors 139079 Dollars							
	ESC ESCALATION	0000	NONE	ZDEPT	No Department	Linear	70.261.82	Dollars

Factors 70261.8 Dollars

Activity ID: 1AD	Description: Set 12 - Halls/Stairs/MCC - I	Dismantlement							Cost Risk 2 Schedule Risk 3			
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS190b	Dismantlement - A5C - only	1.00	ea	HC	0	0	0	60.623	0	60.623	0	60.623
Building Trades	Building Trade Crew of 8 (110d x 6crews)	660.00	dav	EE	0	0	0	2.591.937	0	2.591.937	0	2.591.937
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.118.872	1.118.872	0	1.118.872
	Tot	al for Activ	ity 1AD0012I	10.		0	0	2 652 560	1 118 872	3 771 432	0	3 771 432

Line Item 1AQEDIS190b - Dismantlement - A5C - only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement Breakdown of Historical Data:

Item - Dismantlement Units - 1 lot

Unit Cost - 5,928.61 hrs, \$138.326 subcontracts, \$48,341 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 4,746.68 hours, \$110,749 subcontracts, \$38,704 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 8,179 hrs, \$190,821 subcontracts, \$66,687 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006

to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Units Cost Flement Resources Department Curve

Starts In FY

Linear

0.90907 CA AAD Adjustment Factor

370.524.60 Dollars

3.182.65 Dollars

WBS No: 1AAD Proiect Baseline Devl **Rocky Flats Closure Project** Activity ID: 1AD0012L10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

Activity Filter Starts In FY A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition 60.623.07 Dollars Linear

Factors 66687 Dollars

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (110d x 6crews)

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 6 Crews @ 8 people per crew x 110 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		С	ost Element			Skill			Department		Curve	Ouantity	Units
	A5B	CONSTRU	JCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 Fa	acility Disposition Steelworkers		Linear	1.963.59	Dollars
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr				
-										0	.90907 CA AAD Ad	liustment Factor	
L	A5B	CONSTRU	JCTION	L090	GENERA	L LABORER	KA70H	371 Fa	acility Disposition Steelworkers		Linear	981.79	Dollars
	Factors	2	Laborers		9	hours a day		60	\$/hr				
-										0	.90907 CA AAD Ad	liustment Factor	
L	A5B	CONSTRU	JCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371 I	Facility Disposition		Linear	490.90	Dollars
	Factors	1	Foreman		9	hours a day		60	\$/hr				
_		1								0	.90907 CA AAD Ad	liustment Factor	
L	A5B	CONSTRU	JCTION	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA70H	371 Fa	acility Disposition Steelworkers		Linear	490.90	Dollars
	Factors	1	RCT		9	hours a day		60	\$/hr				

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	744.854.60	Dollars
	Factors	744855 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	374.017.00	Dollars

Factors 374017 Dollars

Activity ID: 1AD0012L20

Description: Set 12 - Halls/Stairs/MCC - Decontamination

Cost Risk 2 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
12L20	Set 12 Decontamination	1.00	each	HC	113	113	3.305	87.161	0	90.466	1.150	91.616
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	49,499	49,499	0	49,499
	Tot	al for Activi	ty 1AD0012L	_20:		113	3,305	87,161	49,499	139,964	1,150	141,115

Line Item 12L20 - Set 12 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 180 hrs, \$54,492 subcontracts, \$1,152 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 310 hrs, \$93,890 subcontracts, \$1,985 supplies

Basis for adjustment - See Below:

Proiect **Rocky Flats Closure Project Baseline Cost and Basis of Estimate**

Baseline Devl WBS Filter 1AAD

Starts In FY

0.90907 CA AAD Adjustment Factor

1AD0012L20 Activity Filter 1) An increase in cost to reflect the unplanned cost increases in the final stages 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

s	Cost Element		Skill		Department	Curve	Quantity Units
75	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	30.00 Hours
Facto	rs 33 hours						
				,		0.90907 CA AAD A	diustment Factor
75	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	71.82 Hours
Facto	rs 79 hours						
				,		0.90907 CA AAD A	diustment Factor
75	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	10.91 Hours
Facto	rs 12 hours						
						0.90907 CA AAD A	diustment Factor
A5	B CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	68.553.79 Dollars
Facto	rs 75411 dollars						
_						0.90907 CA AAD A	diustment Factor
A5	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.804.50 Dollars
Facto	rs 1985 dollars						
						0.90907 CA AAD A	diustment Factor
A5	H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	16.431.42 Dollars
Facto	rs 18075 dollars - Site Prep						
						0.90907 CA AAD A	diustment Factor
A5	H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	370.90 Dollars
Facto	ors 408 dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill			Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	35.305.97	Dollars
	Factors	35306 Dollars					·		
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	14.192.71	Dollars

14192.7 Dollars

Activity ID:	1AD0012L30	Description: Set 12 - Halls/Stairs/MCC - F	Final Surve	V			Cost Risk	2	Schedule R	isk	3

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
12L30	Set 12 Final Survey	1.00	each	HC	120	120	2.790	8.778	0	11.567	971	12.538
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.774	6.774	0	6.774
	Tot	al for Activi	tv 14D0012	130∙		120	2 790	8 778	6 774	18 341	971	19 312

Line Item 12L30 - Set 12 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Page 77 of 135 6/22/00 8:38:45 PM OFFICIAL USE ONLY WBS No: 1AAD Activity ID: 1AD0012L30

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Quantity

Units

Unit Cost - 132 hrs, \$8,889 subcontracts, \$749 supplies
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - 227 hrs, \$15,317 subcontracts, \$1,291 supplies
Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

Department

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

CLiII

Resources

STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	22.27 Hours
24.5 Hours						
					0.90907 CA AAD Adiu	stment Factor
STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	97.72 Hours
107.5 Hours						
					0.90907 CA AAD Adiu	stment Factor
SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	682.26 Dollars
750.5 Dollars						
					0.90907 CA AAD Adju	stment Factor
	STRAIGHT TIME BASE 24.5 Hours STRAIGHT TIME BASE 107.5 Hours SUPPLIES	STRAIGHT TIME BASE	STRAIGHT TIME BASE E130 OTHER ENGINEERS 24.5 Hours STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI 107.5 Hours SUPPLIES 0000 NONE	STRAIGHT TIME BASE E130 OTHER ENGINEERS R100S 24.5 Hours STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI KA10H 107.5 Hours SUPPLIES 0000 NONE KA70S	STRAIGHT TIME BASE 24.5 Hours STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers 107.5 Hours SUPPLIES 0000 NONE KA70S B371 Facility Disposition	STRAIGHT TIME BASE

Factors 8905 Dollars

Cost Element

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources	
	CON

es	Cost Element	Skill	Department	Curve	Quantity	Units
C	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	4.831.79	Dollars
Fa	ctors 4831.79 Dollars					
F	SC ESCALATION	0000 NONE	ZDEPT No Department	Linear	1 942 34	Dollars

Factors 1942.34 Dollars

Activity ID: 1AD0013B10 Description: Set 13 - Ventilation - Planning & Eng

Cost Risk 2 Schedule Risk

Curve

Line Item	Description	Quantity U	nits BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
13B10	Set 13 P&E	1.00 each	HC	2.454	2.454	72.606	345.959	0	418.565	22.902	441.467
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	148.632	148.632	0	148.632
Total for Activity 1AD0013B10:						72.606	345.959	148.632	567.197	22.902	590.099

Line Item 13B10 - Set 13 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering Breakdown of Historical Data: Item - Planning & Engineering

Units - 1 lot

Unit Cost - 756 hours, \$106,153 subcontracts, \$6,122 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 1,303 hrs, \$182,902 subcontracts, \$10,548 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

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WBS No: 1AAD
Activity ID: 1AD0013B10

Rocky Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY *

0.90907 CA AAD Adjustment Factor

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element		Skill		Devartment	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	1.779.96 Hours
Factors	1958 Hours						
				T		0.90907 CA AAD Ad	iustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	628.17 Hours
Factors	691 Hours						
		1	_	1		0.90907 CA AAD Ad	iustment Factor
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	46.36 Hours
Factors	51 Hours						
		1	_	1		0.90907 CA AAD Ad	iustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	18.865.00 Dollars
Factors	20752 Dollars						
						0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	268.839.80 Dollars
Factors	295731 Dollars						
		1	_	1		0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	6.028.04 Dollars
Factors	6631 Dollars						
						0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	48.651.55 Dollars
Factors	53518 Dollars						
				,		0.90907 CA AAD Ad	iustment Factor
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	3.574.46 Dollars
Factors	3932 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	93.005.98	Dollars
_	Factors	93006 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	55.626.25	Dollars

Factors 55626.3 Dollars

Activity ID: 1AD0013B30 Description: Set 13 - Ventilation - Site Support	Cost Risk	2 Schedule Risk 2	2
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Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
13B30	330 Set 13 Site Support 1.00 each		each	HC	9,583	9,583	208,936	1,298,218	0	1,507,153	68,194	1,575,348
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	617,474	617,474	0	617,474
Total for Activity 1AD0013B30:						9,583	208,936	1,298,218	617,474	2,124,628	68,194	2,192,822

Line Item 13B30 - Set 13 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services Breakdown of Historical Data: Item - Support Services WBS No: 1AAD Activity ID: 1AD0013B30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY

Units

Units - 1 lot

Unit Cost - 2,935 hrs, \$393,448 subcontracts, \$26,459 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 5,057 hrs, \$677,911 subcontracts, \$45,589 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	2.298.13 Hours
Factors	2528 Hours						
						0.90907 CA AAD A	diustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	6.177.12 Hours
Factors	6795 Hours						
				1	1	0.90907 CA AAD A	diustment Factor
750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	1.108.15 Hours
Factors	1219 Hours						
						0.90907 CA AAD A	diustment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	81.803.47 Dollars
Factors	89986 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.180.893.00 Dollars
Factors	1299014 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	10.142.48 Dollars
Factors	11157 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	10.151.57 Dollars
Factors	11167 Dollars						
						0.90907 CA AAD A	diustment Factor
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	15.226.90 Dollars

Line Item SYS - Contingency And Escalation

Factors

BOE

Resources

es	Skill Skill					Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	403.631.20	Dollars
	Factors	403631 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	213.843.10	Dollars

213843 Dollars

16750 Dollars

Activity ID: 1AD0013L10

Description: Set 13 - Remaining Ventilation - Dismantlement

Cost Risk	Schedule Risk	

cy on	Total Prime Cost	Burden Cost	Total
0	825.550	0	82

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS160	Dismantlement - A5C only	1.00	ea	HC	0	0	0	825.550	0	825.550	0	825.550
Building Trades	Building Trade Crew of 8 (158d x 4crews)	632.00	dav	EE	0	0	0	2.481.976	0	2.481.976	0	2.481.976
Steekworkers	Steelworker Crew of 15 (158d x 1crew)	158.00	dav	EE	104	16.482	349.339	0	0	349.339	121.570	470.909
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.084.444	2.084.444	0	2.084.444

0.90907 CA AAD Adjustment Factor

WBS No: 1AAD Activity ID: 1AD0013L10

Rockv Flats Closure Proiect Proiect Baseline Cost and Basis of Estimate Proiect WBS Filter 1AAD

Total for Activity 1AD0013L10: 16.482 349.339 3.307.526 2.084.444 5.741.309 121

Line Item 1AQEDIS160 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 102,961 hrs, \$2,402,264 subcontracts, \$839,524 supplies

1st Unit Cost Adjustment factor - .8006

Revised Unit Cost - 82,434 hours, \$1,923,349 subcontracts, \$672,157 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size

reduction facility and the elimination of the Protected Area reduced costs by .96.

2nd Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 142,034 hrs, \$3,313,931 subcontracts, \$1,158,127 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces	Cost Element	Skill	Department	Curve	Quantity	Units
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	825.549.90 D	ollars

Factors 908127 Dollars

0.90907 CA AAD Adjustment Factor

5.862.879

Line Item Building Trades - Building Trade Crew of 8 (158d x 4crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 4 Crews @ 8 people per crew x 158 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element Skill				Skill	Department				Curve	Ouantity	Units	
	A5B	CONSTR	RUCTION	C080	PLUMB	ERS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers		Linear	1.963.59	Dollars
1	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr				
_										0.	90907 CA AAD A	diustment Factor	
	A5B	CONSTR	RUCTION	L090	GENER	AL LABORER	KA70H	371 F	acility Disposition Steelworkers		Linear	981.79	Dollars
1	Factors	2	Laborers		9	hours a day		60	\$/hr				
_										0.	90907 CA AAD A	diustment Factor	
	A5B	CONSTR	RUCTION	M010	FOREM	EN / TEAM LEADS / GROUP	KA70S	B371	Facility Disposition		Linear	490.90	Dollars
- 1	Factors	1	Foreman		9	hours a day		60	\$/hr				
_										0.	90907 CA AAD A	diustment Factor	

WBS No: 1AAD Rocky Flats Closure Project Activity ID: 1AD0013L10

Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

Starts In FY T050 RADIATION CONTROL TECHNOLIGI | KA70H | 371 Facility Disposition Steelworkers 490 90 Dollars Linear

Factors 1 RCT hours a day

Line Item Steekworkers - Steelworker Crew of 15 (158d x 1crew)

CONSTRUCTION

A5B

0.90907 CA AAD Adjustment Factor

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 4 Crews @ 8 people per crew x 227 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element			Skill				Department	Curve	<i>Ouantity</i>	Units
	750	STRAIG	HT TIME BASE	C120	D&D SKII	LLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	62.59	Hours
	Factors	9	D&D Workers		7.65	hours a day					

0.90907 CA AAD Adjustment Factor 750 M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 6.95 Hours STRAIGHT TIME BASE Linear

7.65 hours a day Factors Foreman 0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers 34.77 Hours Linear

Factors 5 **RCTs** 7.65 hours a day

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

s	Cost Element		Skill		Department	Curve	Quantity Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.499.106.00 Dollars
Factors	1499106 Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	585.338.00 Dollars

585338 Dollars Factors

Activity ID: 1AD0013L1A Description: Set 13 - System 1 Zone 1 - Dismantlement Cost Risk 4 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS245	Dismantlement - A5C only	1.00	ea	HC	0	0	0	480.635	0	480.635	0	480.635
Building Trades	Building Trade Crew of 8 (158d x 3crews)	474.00	dav	EE	0	0	0	1.861.482	0	1.861.482	0	1.861.482
Steekworkers	Steelworker Crew of 15 (158d x 1crew)	158.00	dav	EE	104	16.482	349.339	0	0	349.339	113.464	462.803
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.099.782	1.099.782	0	1.099.782
	Tot	Total for Activity 1AD0013L1A:					349,339	2,342,117	1,099,782	3,791,238	113,464	3,904,702

Line Item 1AQEDIS245 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot.

Unit Cost - 47,003.81 hrs, \$1,096,687 subcontracts, \$383,262 supplies

Unit Cost Adjustment factor - .8006

Revised Unit Cost - 37,633.13 hours, \$878,052 subcontracts, \$306,855 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size reduction facility and the elimination of the Protected Area reduced costs by .96.

WBS No: 1AAD Activity ID: 1AD0013L1A

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter

1AAD

Baseline Devl

Starts In FY

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element		Skill		Department	Curve	Ouantity	Units
	A5C SUPPLIES	0000	NONE K	KA70S	B371 Facility Disposition	Linear	480.634.80	Dollars

528711 Dollars Factors

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (158d x 3crews)

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 3 Crews @ 8 people per crew x 158 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	es Cost Element					Skill			Department		Curve	Ouantity	Units
	A5B	CONSTR	UCTION	C080	PLUMBER	RS AND PIPEFITTERS	KA70H	371 Fa	cility Disposition Steelworkers		Linear	1.963.59	Dollars
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr				
-										0	.90907 CA AAD Adiu	ustment Factor	
	A5B	CONSTR	UCTION	L090	GENERAL	LABORER	KA70H	371 Fa	cility Disposition Steelworkers		Linear	981.79	Dollars
	Factors	2	Laborers		9	hours a day		60	\$/hr				
-										0	.90907 CA AAD Adiu	ustment Factor	
L	A5B	CONSTR	UCTION	M010	FOREMEN	N / TEAM LEADS / GROUP	KA70S	B371 F	acility Disposition		Linear	490.90	Dollars
	Factors	1	Foreman		9	hours a day		60	\$/hr				
-										0	90907 CA AAD Adiu	ustment Factor	
Į	A5B	CONSTR	UCTION	T050	RADIATIO	N CONTROL TECHNOLIGI	KA70H	371 Fa	cility Disposition Steelworkers		Linear	490.90	Dollars
	Factors	1	RCT		9	hours a day		60	\$/hr				

Line Item Steekworkers - Steelworker Crew of 15 (158d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Cost Element

Units - 1 Crew @ 15 people per crew x 158 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

750	STRAIGH	HT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	62.59lHours
Factors	9	D&D Workers	7.65 hours a day			
					0.90907 CA AAD Adii	Istment Factor

Department

		0.90907 CA AAD Adiu	stment Factor
750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried	Linear	6.95 Hours
Factors 1 Foreman	7 65 hours a day		

0.90907 CA AAD Adjustment Factor

Page 83 of 135 6/22/00 8:38:48 PM OFFICIAL USE ONLY WBS No: 1AAD Activity ID: 1AD0013L1A

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Linear

Starts In FY

T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers STRAIGHT TIME BASE Factors 5 **RCTs** 7.65 hours a day

Line Item SYS - Contingency And Escalation

0.90907 CA AAD Adjustment Factor

Resources

es	Cost Element Skill			Department	Curve	Quantity	Units	
C	ON CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	723.027.70	Dollars
Fac	ors 723028 Dollars							
E		0000	NONE	ZDEPT	No Department	Linear	376.754.30	Dollars

Factors 376754 Dollars

Activity ID: 1AD0013L1B Description: Set 13 - System 2 Zone 1 - Dismantlement Cost Risk 4 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQEDIS240	Dismantlement - A5C only	1.00	ea	HC	0	0	0	480.635	0	480.635	0	480.635
Building Trades	Building Trade Crew of 8 (158d x 3crews)	474.00	dav	EE	0	0	0	1.861.482	0	1.861.482	0	1.861.482
Steekworkers	Steelworker Crew of 15 (158d x 1crew)	158.00	dav	EE	104	16.482	349.339	0	0	349.339	121.570	470.909
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.551.858	1.551.858	0	1.551.858
	То	tal for Activi	ty 1AD0013L	_1B:		16.482	349.339	2.342.117	1.551.858	4.243.314	121.570	4.364.884

Line Item 1AQEDIS240 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 47,003.81 hrs, \$1,096,687 subcontracts, \$383,262 supplies

Unit Cost Adjustment factor - .8006

Revised Unit Cost - 37,633.13 hours, \$878,052 subcontracts, \$306,855 supplies

Basis for adjustment - Unit cost reduced by .834 to account for availability of size reduction facility and the elimination of the Protected Area reduced costs by .96.

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	480.634.80	Dollars

528711 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (158d x 3crews)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 3 Crews @ 8 people per crew x 158 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources Cost Element Skill Curve Quantity Units Department

WBS No: 1AAD
Activity ID: 1AD0013L1B

Rocky Flats Closure Project
Project Baseline Devl
WBS Filter 1AAD

Rocky Flats Closure Project
WBS Filter 1AAD

				Buschille Gost at	ia Basis	, O. L.	Activity Filter	*	Starts In FY *
A5B CON	STRUCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 F	acility Disposition Steelworkers	Linear	1.963.59 Dollars
Factors 4	Pipe Fitters		9	hours a day		60	\$/hr		
								0.90907 CA AAD Adiu	stment Factor
A5B CON	STRUCTION	L090	GENERA	L LABORER	KA70H	371 F	acility Disposition Steelworkers	Linear	981.79 Dollars
Factors 2	Laborers		9	hours a day		60	\$/hr		
								0.90907 CA AAD Adiu	stment Factor
A5B CON	STRUCTION	M010	FOREME	N / TEAM LEADS / GROUP	KA70S	B371	Facility Disposition	Linear	490.90 Dollars
Factors 1	Foreman		9	hours a day		60	\$/hr		
								0.90907 CA AAD Adiu	stment Factor
A5B CON	STRUCTION	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA70H	371 F	acility Disposition Steelworkers	Linear	490.90 Dollars
Factors 1	RCT		9	hours a day		60	\$/hr		

0.90907 CA AAD Adjustment Factor

Line Item Steekworkers - Steelworker Crew of 15 (158d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 15 people per crew x 158 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	62.59	Hours
	Factors	9 D&D Workers		7.65 hours a day					
_							0.90907 CA AAD Adiu	stment Factor	
	750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	6.95	Hours
	Factors	1 Foreman		7.65 hours a day					
_							0.90907 CA AAD Adiu	stment Factor	
	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	34.77	Hours

Factors 5 RCTs 7.65 hours a day

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

s	Cost Element Skill		Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT No Department	Linear	1.116.077.00	Dollars
Factors	1116077 Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT No Department	Linear	435,781.20	Dollars

Factors 435781 Dollars

Activity ID: 1AD0013L20	Description: Set 13 - Ventilation - Deconta	mination			Cost Risk	4 Schedule I	Risk	4

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
13L20	Set 13 Decontamination	1.00	each	HC	1,766	1,766	51,863	1,372,739	0	1,424,602	18,048	1,442,650
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	967,249	967,249	0	967,249
	Total for Activity 1AD0013L20:						51,863	1,372,739	967,249	2,391,851	18,048	2,409,899

Line Item 13L20 - Set 13 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

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WBS No: 1AAD Activity ID: 1AD0013L20

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY *

Item Desc - Decommissioning Decontamination Breakdown of Historical Data: Item - Decontamination Units - 1 lot Unit Cost - 2,832 hrs, \$858,260 subcontracts, \$18,140 supplies Unit Cost Adjustment factor - 1.723
Revised Unit Cost - 4,880 hrs, \$1,478,782 subcontracts, \$31,255 supplies Basis for adjustment - See Below: 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

S Cost Element	Skill	Department	Curve	Ouantity Units
750 STRAIGHT TIME BASE	C120 D&D SKILLED TRADES	KA70H 371 Facility Disposition Steelworkers	Linear	468.17 Hours
Factors 515 hours				
			0.90907 CA AAD A	Adjustment Factor
750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	1.130.88 Hours
Factors 1244 hours				
			0.90907 CA AAD A	Adiustment Factor
750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECH	HNOLIGI KA10H 371 Complex Steelworkers	Linear	167.27 Hours
Factors 184 hours				
			0.90907 CA AAD A	Adjustment Factor
A5B CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	1.079.716.00 Dollars
Factors 1187716 dollars				
			0.90907 CA AAD A	Adjustment Factor
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	28.412.95 Dollars
Factors 31255 dollars				
			0.90907 CA AAD A	Adjustment Factor
A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	5,856.22 Dollars
Factors 6442 dollars				
			0.90907 CA AAD A	Adjustment Factor
A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	258,753.70 Dollars
Factors 284636 dollars - Site Prep				

Line Item SYS - Contingency And Escalation

Factors 272636 Dollars

BOE

Resources

es		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	694.612.70	Dollars
_	Factors	694613 Dollars							
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	272.636.10	Dollars

Activity ID: 1AD0013L30 Description: Set 13 - Ventilation - Final Survey

Line Item	Description	Quantity	Units	BOE	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub		Total Prime Cost	Burden Cost	Total Cost
				Type	Hours/Unii	Totat	Totat	Cost	& Escalation	Cost		
13L50	Set 13 Final Survey	1.00 each			1.889	1.889	43.936	138.246	0	182.183	15.290	197.472
SYS	Contingency And Escalation	1.00 ea				0	0	0	169.418	169.418	0	169.418
	Tot	ty 1AD0013	L30:		1.889	43.936	138.246	169.418	351.601	15.290	366.891	

Cost Risk

0.90907 CA AAD Adjustment Factor

2 Schedule Risk

WBS No: 1AAD Activity ID: 1AD0013L30

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

0.90907 CA AAD Adjustment Factor

2 Schedule Risk

Line Item 13L50 - Set 13 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey

Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 2,075 hrs, \$140,011 subcontracts, \$11,799 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 3,575 hrs, \$241,239 subcontracts, \$20,330 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%

Basis of Estimates were based upon Management Directive to accept additional risk.

- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve	Ouantity Units
	750	STRAIGHT TIME BASE	E130 OTHER ENGINEERS			RMRS Salaried	Linear	351.36 Hours
1	Factors	386.5 Hours						
_							0.90907 CA AAD Adiu	stment Factor
	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	1.538.14 Hours
1	Factors	1692 Hours						
							0.90907 CA AAD Adiu	stment Factor
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	10.744.74 Dollars
1	Factors	11819.5 Dollars						
							0.90907 CA AAD Adiu	stment Factor
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	127.501.50 Dollars

Factors 140255 Dollars

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	125.372.20	Dollars
	Factors	125372 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	44.046.24	Dollars

Factors 44046.2 Dollars

Activity ID: 1AD0014B10 Description: Set 14 - Outside Tanks Planning & Engineering

Line Item	Description	2		BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
14B10	Set 14 P&E	1.00	each	HC	85	85	2.496	11.842	0	14.339	761	15.100
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.998	2.998	0	2.998
	Tot	Total for Activity 1AD0014B10:						11.842	2.998	17.337	761	18.098

Line Item 14B10 - Set 14 P&E

BOE

Historical Data Source - The costs for Decommissioning Bl23, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Cost Risk

WBS No: 1AAD Activity ID: 1AD0014B10

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY *

Quantity Units

0.90907 CA AAD Adjustment Factor

2 Schedule Risk

Breakdown of Historical Data:

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 12 hours, \$1,685 subcontracts, \$97 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 21 hrs, \$2,903 subcontracts, \$167 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Ouantity Units
	750	STRAIGHT TIME BASE	E130 OTHER EN	GINEERS	R100S	RMRS Salaried	Linear	60.91 Hours
	Factors	67 Hours						
					T	T	0.90907 CA AAD Adi	ustment Factor
	750	STRAIGHT TIME BASE	G010 ADMINISTE	ATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	21.82 Hours
	Factors	24 Hours						
					T	T	0.90907 CA AAD Adi	ustment Factor
	750	STRAIGHT TIME BASE	M010 FOREMEN	/ TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1.82 Hours
	Factors	2 Hours						
			1				0.90907 CA AAD Adi	ustment Factor
	A5C	SUPPLIES	0000 NONE		KA70S	B371 Facility Disposition	Linear	645.44 Dollars
	Factors	710 Dollars						
			1		ı		0.90907 CA AAD Adi	
	A5H	SUBCONTRACTED SRVS	0000 NONE		KA70S	B371 Facility Disposition	Linear	9.202.50 Dollars
	Factors	10123 Dollars						
			1		1		0.90907 CA AAD Adi	
	A5H	SUBCONTRACTED SRVS	E050 ENVIRONM	ENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	206.36Dollars
	Factors	227 Dollars						
			1		1		0.90907 CA AAD Adi	
	A5H	SUBCONTRACTED SRVS	E130 OTHER EN	GINEERS	KA70S	B371 Facility Disposition	Linear	1.665.41 Dollars
	Factors	1832 Dollars						
							0.90907 CA AAD Adi	
	A5H	SUBCONTRACTED SRVS	G010 ADMINISTE	ATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	122.72 Dollars
	Factors	135 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.653.22	Dollars
	Factors	1653.22 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.345.01	Dollars
	_	404E04 B II							

Factors 1345.01 Dollars

Activity ID: 1AD0014B30	Description: Set 14 - Outside Tanks Site Support
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Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
14B30	Set 14 Site Support	1.00	each	HC	329	329	7.179	44.436	0	51.615	2.024	53.639	
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	7.718	7.718	0	7.718	

WBS No: 1AAD Activity ID: 1AD0014B30

Proiect **Rocky Flats Closure Project Baseline Cost and Basis of Estimate**

329

Department

Baseline Devl WBS Filter

7.179

1AAD

Curve

Ouantity

Units

61.357

Line Item 14B30 - Set 14 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 46 hrs, \$6,245 subcontracts, \$420 supplies

Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 79 hrs, \$10,760 subcontracts, \$724 supplies

Basis for adjustment - See Below:

Cost Element

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

Total for Activity 1AD0014B30:

- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Skill

Resources

Cost Etement	Skill	Debarimeni	Curve	Ouanity Units
750 STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S RMRS Salaried	Linear	79.09 Hours
ctors 87 Hours				
			0.90907 CA AAD Ad	diustment Factor
750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	211.81 Hours
actors 233 Hours				
			0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	P150 TRAINERS	R100S RMRS Salaried	Linear	38.18 Hours
actors 42 Hours				
			0.90907 CA AAD A	diustment Factor
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	2.799.93 Dollars
actors 3080 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	40.420.84 Dollars
actors 44464 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	E110 QUALITY CONTROL ENGINEERS	KA70S B371 Facility Disposition	Linear	347.26 Dollars
actors 382 Dollars				
T.			0.90907 CA AAD Ad	diustment Factor
A5H SUBCONTRACTED SRVS	E120 SAFETY ENGINEERS	KA70S B371 Facility Disposition	Linear	347.26 Dollars
actors 382 Dollars				
			0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	E130 OTHER ENGINEERS	KA70S B371 Facility Disposition	Linear	520.90 Dollars
actors 573 Dollars				
			0.90907 CA AAD Ad	djustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000 N	IONE	ZDEPT	No Department	Linear	2.567.31	Dollars
	Factors	2567.31 Dollars							

WBS No: 1AAD
Rocky Flats Closure Project Baseline Devl
Activity ID: 1AD0014B30
Rocky Flats Closure Project WBS Filter
Baseline Cost and Basis of Estimate
1AAD
1AAD

ESC ESCALATION 0000 NONE ZDEPT No Department Linear 5.150,25 Dollars

Factors 5150.25 Dollars

Activity ID: 1AD0014L10 Description: Set 14 - Outside Tanks - Dismantlement Cost Risk 4 Schedule Risk 4

,	Description. Col. 1. Culcius I aline Di			Cost Itisit	. Beneumer								
Line Item	Description	Quantity	Quantity Units		Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
					Hours/Unit	Total	Total	Cost	& Escalation	Cost			
1AQ381X550	Dismantlement - A5C only	1.00	1.00 ea		0	0	0	445	0	445	0	445	
Building Trades	Building Trade Crew of 8 (72d x 1crew)	72.00	dav	EE	0	0	0	282.757	0	282.757	0	282.757	
SYS	Contingency And Escalation	1.00	1.00 ea		0	0	0	0	41,403	41,403	0	41.403	
	To	tal for Activ	itv 1AD0014	L10:		0	0	283.201	41.403	324.605	0	324.605	

Line Item 1AQ381X550 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 78 hrs, \$17,028 subcontracts, \$284 supplies

Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 134 hrs, \$29,339 subcontracts, \$489 supplies

Basis for adjustment - See Below:

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006

to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces	Cost Element Skill				Department	Curve	Quantity	Units	
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	444.53	Dollars

Factors 489 Dollars

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Line Item Building Trades - Building Trade Crew of 8 (72d x 1crew)

Units - 1 Crew @ 8 people per crew x 72 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element			Skill				Department	Curve	Ouantity	Units	
	A5B	CONST	RUCTION	C080	PLUMBE	RS AND PIPEFITTERS	KA70H	371 Fa	cility Disposition Steelworkers	Linear	1.963.5	9 Dollars	
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr				

									0.90907 CA AAD Adiu	stment Factor
A5B	CONST	RUCTION	L090	GENERA	L LABORER	KA70H	371 Fac	ility Disposition Steelworkers	Linear	981.79 Dollars
Factors	2	Laborers		9	hours a day		60	\$/hr		

0.90907 CA AAD Adjustment Factor

WBS No: Baseline Devl 1AAD Proiect **Rocky Flats Closure Project** Activity ID: 1AD0014L10 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

		Activity Filter *	Starts In F	Y *
A5B	CONSTRUCTION	M010 FOREMEN / TEAM LEADS / GROUP KA70S B371 Facility Disposition	Linear 490.9	0 Dollars
Factors	1 Foreman	9 hours a dav 60 \$/hr		
		0.90	907 CA AAD Adjustment Factor	r
A5B	CONSTRUCTION	T050 RADIATION CONTROL TECHNOLIGI KA70H 371 Facility Disposition Steelworkers	Linear 490.9	0 Dollars

Factors 1 hours a day RCT

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	14.211.53	Dollars
Ι	actors	14211.5 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	27.191.93	Dollars

Factors 27191.9 Dollars

Activity ID: 1AD0014I 20 Description: Set 14 - Outside Tanks - Decontamination Cost Risk 4 Schedule Risk

ACTIVITY ID. IAD	Description. Oct 14 October Talika Des	contaminat	.1011				Cost Risk 4 Schedule Risk 4					
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		1
14L20	Set 14 Decontamination	1.00	each	HC	28	28	817	21.789	0	22.606	230	22.836
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3.339	3.339	0	3.339
	Tot	al for Activ	itv 1AD0014	L20:		28	817	21.789	3.339	25.944	230	26.175

Line Item 14L20 - Set 14 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 45 hrs, \$13,623 subcontracts, \$288 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 78 hrs, \$23,472 subcontracts, \$496 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve	Ouantity	Units
	750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	8.18 Ho	ours
	Factors	9 hours							
г				T	ı		0.90907 CA AAD Adiu	stment Factor	
Į	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	17.27 Ho	ours
	Factors	19 hours							
						_	0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	2.73 Ho	ours
	Factors	3 hours							
						_	0.90907 CA AAD Adiu	stment Factor	
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	17.138.67 Do	ollars
	Factors	18853 dollars							
_							0.90907 CA AAD Adiu	stment Factor	

WBS No: 1AAD Baseline Devl Proiect Rocky Flats Closure Project Activity ID: 1AD0014L20 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition 450.90 Dollars Linear Factors 496 dollars 0.90907 CA AAD Adjustment Factor SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 4.106.26 Dollars A5H Linear 4517 dollars - Site Prep Factors 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 92.73 Dollars Linear 102 dollars Factors 0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve **Ouantity** Units CON CONTINGENCY 1.145.95 Dollars 0000 NONE ZDEPT No Department Linear Factors 1145.95 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 2.192.63 Dollars Linear Factors 2192.63 Dollars Activity ID: 1AD0014L30 Cost Risk 4 Schedule Risk Description: Set 14 - Outside Tanks - Final Survey Materials/ Sub | Contingency Line Item Description Units BOELabor Labor Hours Labor Cost Total Prime Burden Cost Total Cost **Ouantity** Hours/Unit Total & Escalation TypeTotal Cost 14L30 Set 14 Final Survey 1.00 each HC 30 30 696 2.194 2.890 196 3.087 SYS Contingency And Escalation 1.00 ea FF 0 451 451 0 451 Total for Activity 1AD0014L30: 30 696 2.194 451 196 3.538 3.342 Line Item 14L30 - Set 14 Final Survey Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of BOE gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999. Item Desc - Decommissioning Final Survey Breakdown of Historical Data: Item - Final Survey Units - 1 lot Unit Cost - 33 hrs, \$2,223 subcontracts, \$187 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 57 hrs, \$3,830 subcontracts, \$323 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95% 2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction. Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions. Units Cost Element Skill Curve Resources Department E130 OTHER ENGINEERS R100S RMRS Salaried 750 STRAIGHT TIME BASE Linear 5.45 Hours Factors Hours

T050 RADIATION CONTROL TECHNOLIGI KA10H 371 Complex Steelworkers

KA70S B371 Facility Disposition

STRAIGHT TIME BASE

Hours

0000 NONE

27

Factors 187.5 Dollars

A5C SUPPLIES

Factors

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0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

170 45 Dollars

Linear

Linear

WBS No: 1AAD Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1AD0014L30 WBS Filter 1AAD **Baseline Cost and Basis of Estimate**

Activity Filter Starts In FY A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 2.024.04 Dollars Linear

Factors 2226.5 Dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

Resources

s	Cost Element	Skill			Department	Curve	Quantity	Units
CON	CONTINGENCY			No Department	Linear	154.89	Dollars	
Factors	154.893 Dollars							
	ESCALATION	0000	NONE	7DFPT	No Department	Linear	296.37	Dollars

296.367 Dollars Factors

Activity ID: 1AD0015B10

Description: Set 15 - Exterior Offices Planning & Engineering

Cost Risk 2 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
15B10	Set 15 P&E	1.00	each	HC	18	18	542	2.631	0	3.173	188	3.360
SYS	Contingency And Escalation	1.00 ea		EE	0	0	0	0	941	941	0	941
	Tot	ity 1AD0015	B10:		18	542	2.631	941	4.114	188	4.301	

Line Item 15B10 - Set 15 P&E

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data: Item - Planning & Engineering

Units - 1 lot

Unit Cost - 12 hours, \$1,685 subcontracts, \$97 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 21 hrs, \$2,903 subcontracts, \$167 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element		Skill		Department	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	13.64 Hours
Facto	s 15 Hours						
_						0.90907 CA AAD Ad	liustment Factor
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	4.55 Hours
Facto	s 5 Hours						
_						0.90907 CA AAD Ad	liustment Factor
A50	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	143.63 Dollars
Facto	s 158 Dollars						
						0.90907 CA AAD Ad	liustment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	2.044.50 Dollars
Facto	s 2249 Dollars						
						0.90907 CA AAD Ad	liustment Factor
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	45.45 Dollars
Facto	s 50 Dollars						
						0.90907 CA AAD Ad	liustment Factor

WBS No: 1AAD Rockv Flats Closure Proiect Activity ID: 1AD0015B10 Rockv Flats Closure Proiect Baseline Cost and Basis of Estimate WBS Filter 1AAD Activity Filter *

A5H	SUBCONT	TRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	369.99 Dollars
Factors	407	Dollars						
							0.90907 CA AAD Adi	ustment Factor
Δ5H	SUBCONT	TRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K470S	B371 Facility Disposition	Linear	27 27 Dollars

Factors 30 Dollars

0.90907 CA AAD Adjustment Factor

Starts In FY

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	683.28	Dollars
1	actors	683.284 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	257.69	Dollars

Factors 257.69 Dollars

Activity ID: 1AD0015B30 Description: Set 15 - Exterior Offices Site Support Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		I
15B30	Set 15 Site Support	1.00	each	НС	73	73	1.581	9.874	0	11.455	547	12.002
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3.327	3.327	0	3.327
	Tot	al for Activi	tv 1AD0015	B30·		73	1 581	9 874	3 327	14 782	547	15 329

Line Item 15B30 - Set 15 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 46 hrs, \$6,245 subcontracts, \$420 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 79 hrs, \$10,760 subcontracts, \$724 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es L		Cost Element		Skill		Department	Curve	Ouantity Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	17.27 Hours
1	Factors	19 Hours						
_							0.90907 CA AAD Adig	stment Factor
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	47.27 Hours
	Factors	52 Hours						
_							0.90907 CA AAD Adiu	stment Factor
	750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	8.18 Hours
	Factors	9 Hours						
_							0.90907 CA AAD Adiu	stment Factor
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	621.80 Dollars
	Factors	684 Dollars						
_							0.90907 CA AAD Adiu	stment Factor

WBS No: 1AAD Proiect Baseline Devl **Rocky Flats Closure Project** Activity ID: 1AD0015B30 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

				Baseline Cost a	na Basis	or Estimate	Activity Filter	*	Starts In FY *
A5H	SUBCON'	TRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition		Linear	8.982.51 Dollars
Factors	9881	Dollars							
								0.90907 CA AAD Ad	iustment Factor
A5H	SUBCON'	TRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition		Linear	77,27 Dollars
Factors	85	Dollars							
								0.90907 CA AAD Ad	iustment Factor
A5H	SUBCON'	TRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition		Linear	77,27 Dollars
Factors	85	Dollars							
								0.90907 CA AAD Ad	iustment Factor
A5H	SUBCON	TRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition		Linear	115.45 Dollars

127 Line Item SYS - Contingency And Escalation

Dollars

Factors

BOE

Resources

Г			1		1		T		
es	Cost Element		Skill			Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.407.12	Dollars
_	Factors 2407.12 Dollars								
	FSC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	920.37	Dollars

Factors ____ 920.37 Dollars

Activity ID: 1AD0015I 10 Description: Set 15 - Exterior Offices - Dismantlement Cost Risk 1 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQ374A550	Dismantlement - A5C only	1.00	ea	HC	0	0	0	271	0	271	0	271
1AQ377X550	B116 Dismantlement - A5C only	1.00	ea	HC	0	0	0	41	0	41	0	41
1AQ378X550	Dismantlement - A5C only	1.00	ea	HC	0	0	0	202	0	202	0	202
Building Trades	Building Trade Crew of 8 (16d x 1crew)	16.00	dav	EE	0	0	0	62.835	0	62.835	0	62.835
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	17.563	17.563	0	17.563
Total for Activity 1AD0015L10:						0	0	63.348	17.563	80.912	0	80.912

Line Item 1AQ374A550 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 47 hrs, \$10,371 subcontracts, \$173 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 81 hours, \$17,870 subcontracts, \$298 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element			Curve	Quantity Units
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	270.90 Dollars

Factors 298 Dollars

0.90907 CA AAD Adjustment Factor

0.90907 CA AAD Adjustment Factor

WBS No: 1AAD Activity ID: 1AD0015L10

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Line Item 1AQ377X550 - B116 Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement
Units - 1 lot

Unit Cost - 7 hrs, \$1,555 subcontracts, \$26 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 12 hours, \$2,680 subcontracts, \$45 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of

the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management
Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

rces	Cost Element			Skill		Department	Curve	Ouantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	40.91	Dollars

Factors 45 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQ378X550 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Units - 1 lot

Unit Cost - 28 hrs, \$644 subcontracts, \$129 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 48 hrs, \$11,090 subcontracts, \$222 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces	Cost Element	Skill	Department	Curve	Ouantity	Units
	A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	201.81	Dollars

Factors 222 Dollars

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (16d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were

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WBS No: 1AAD Activity ID: 1AD0015L10

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter

1AAD

Baseline Devl

Activity Filter Starts In FY

developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 8 people per crew x 16 days

Unit Adjustment factor - .9090688 reduction per management directive.

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element			Skill				Department		Curve	Quantity	Units
A5E	CONST	RUCTION	C080	PLUMBER	RS AND PIPEFITTERS	KA70H	70H 371 Facility Disposition Steelworkers			Linear	1.963.59	Dollars
Factor	·s 4	Pipe Fitters		9	hours a dav		60	\$/hr				
						1			0.	90907 CA AAD Ad	iustment Factor	
A5E	CONST	RUCTION	L090	GENERAL	LABORER	KA70H	371 Fa	acility Disposition Steelworkers		Linear	981.79	Dollars
Factor	·s 2	Laborers		9	hours a day		60	\$/hr				
									0.	90907 CA AAD Ad	iustment Factor	
A5E	CONST	RUCTION	M010	FOREMEN	N / TEAM LEADS / GROUP	KA70S	B371 F	Facility Disposition		Linear	490.90	Dollars
Factor	s 1	Foreman		9	hours a day		60	\$/hr				
									0.	90907 CA AAD Ad	iustment Factor	
A5E	CONST	RUCTION	T050	RADIATIO	N CONTROL TECHNOLIGI	KA70H	371 Fa	acility Disposition Steelworkers		Linear	490.90	Dollars
Factor	s 1	RCT		9	hours a day		60	\$/hr				

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

Line Item

es		Cost Element	Skill			Department	Curve	Quantity	Units
	CON CON	NTINGENCY	0000	NONE	ZDEPT	No Department	Linear	12.705.26	Dollars
	Factors 1	2705.3 Dollars							
	ESC ESC	CALATION	0000	NONE	ZDEPT	No Department	Linear	4.857.89	Dollars

Labor

Hours/Unit

28

0

Labor Hours

Total

28

0

28

Labor Cost

Total

817

817

BOE

Type

HC

EE

Units

Factors 4857.89 Dollars

Set 15 Decontamination

Contingency And Escalation

Activity ID: 1AD0015L20

Description: Set 15 - Exterior Offices - Decontamination

Cost Risk 2 Schedule Risk

6.409

21.789

Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
Cost	& Escalation	Cost		
21,789	0	22,606	283	22,888
0	6,409	6,409	0	6,409

29.015

Line Item 15L20 - Set 15 Decontamination

BOE

15L20

SYS

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Description

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 45 hrs, \$13,623 subcontracts, \$288 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 78 hrs, \$23,472 subcontracts, \$496 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

Quantity

1.00 each

Total for Activity 1AD0015L20:

1.00 ea

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the

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Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resou	rces
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es		Cost Element		Skill		Department	Curve	Quantity	Units
L	750	STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	8.18	Hours
1	Factors	9 hours							
_							0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	17.27	Hours
1	Factors	19 hours							
_							0.90907 CA AAD Adiu	stment Factor	
L	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	2.73	Hours
	Factors	3 hours							
г			ı	1			0.90907 CA AAD Adiu	stment Factor	
L	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	17.138.67	Dollars
1	Factors	18853 dollars							
г			ı	1			0.90907 CA AAD Adiu	stment Factor	
L	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	450.90	Dollars
	Factors	496 dollars							
г			ı	1			0.90907 CA AAD Adiu	stment Factor	
L	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	4.106.26	Dollars
1	Factors	4517 dollars - Site Prep							
_			ı				0.90907 CA AAD Adiu	stment Factor	
L	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	92.73	Dollars

102

Factors

Line Item SYS - Contingency And Escalation

BOE

Resource

ces	Cost Element Skill			Department	Curve	Quantity	Units		
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	4.654.04	Dollars
	Factors	4654.04 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.755.20	Dollars
	-	4755 0 D II							

1755.2 Dollars

dollars

Activity II	D: 1	AD00	15L3
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Description: Set 15 - Exterior Offices - Final Survey

Cost Risk 2 Schedule Risk

0.90907 CA AAD Adjustment Factor

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
15L30	Set 15 Final Survey	1.00	each	НС	30	30	696	2.194	0	2.890	241	3.131
SYS	Contingency And Escalation	1.00		EE	0	0	0	0	877	877	0	877
•	Tot	-	ty 1AD0015I	L30:		30	696	2.194	877	3.767	241	4.008

Line Item 15L30 - Set 15 Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey Breakdown of Historical Data: Item - Final Survey Units - 1 lot Unit Cost - 33 hrs, \$2,223 subcontracts, \$187 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 57 hrs, \$3,830 subcontracts, \$323 supplies Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

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Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter Activity Filter

1AAD

Starts In FY

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s		Cost Element		Skill		Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	5.45	Hours
72		C Hours							

Hours

						0.90907 CA AAD Adii	ustment Factor
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	24.54 Hours

Factors 27 Hours

							0.90907 CA AAD Adii	ustment Factor
L	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	170.45 Dollars

Factors 187.5 Dollars

						0.90907 CA AAD AG	usimeni racioi
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	2.024.04 Dollars

Factors 2226.5 Dollars

0.90907 CA AAD Adjustment Factor

0.00007 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

Line Item

es		Cost Element	Cost Element Skill			Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	636.68	Dollars
ن د	Factors	636.682 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	240.12	Dollars

240.115 Dollars Factors

Set 16 P&E

Activity ID: 1AD0016B10

Description: Set 16 - Ancillary Bldgs Planning & Engineering

Cost Risk 1 Schedule Risk

1.759

Materials/ Sub

Cost

4.934

4.934

7.740

1 Schedule Risk 1										
Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost							
0	5.981	362	6.344							
1.759	1.759	0	1.759							

362

8.102

Line Item 16B10 - Set 16 P&E

BOE

16B10

SYS

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Labor

Hours/Unit

35

Labor Hours

Total

35

0

35

Labor Cost

Total

1.047

1.047

Item Desc - Decommissioning Planning & Engineering

Description

Breakdown of Historical Data:

Contingency And Escalation

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 23 hours, \$3,370 subcontracts, \$194 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 40 hrs, \$5,807 subcontracts, \$334 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

Quantity

1.00 each

Total for Activity 1AD0016B10:

1.00 ea

Units

BOE

Type

HC

EE

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.
- 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

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 WBS No:
 1AAD

 Activity ID:
 1AD0016B10

Rocky F

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

Activity Filter Starts In FY Cost Element Skill Curve Resources Department R100S RMRS Salaried STRAIGHT TIME BASE E130 OTHER ENGINEERS Linear 750 Factors 28 Hours 0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE G010 ADMINISTRATIVE ASSISTANTS R100S RMRS Salaried 9.09 Hours Linear Factors 10 Hours 0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried Linear 0.91 Hours Factors Hours 0.90907 CA AAD Adjustment Factor A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition Linear 269.08 Dollars Factors 296 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS 0000 NONE KA70S B371 Facility Disposition 3.834.45 Dollars Linear Factors 4218 Dollars 0.90907 CA AAD Adjustment Factor E050 ENVIRONMENTAL ENGINEERS KA70S B371 Facility Disposition SUBCONTRACTED SRVS Linear 86.36 Dollars 95 Dollars Factors 0.90907 CA AAD Adjustment Factor E130 OTHER ENGINEERS KA70S B371 Facility Disposition 693.62 Dollars A5H SUBCONTRACTED SRVS Linear Factors 763 Dollars 0.90907 CA AAD Adjustment Factor A5H SUBCONTRACTED SRVS G010 ADMINISTRATIVE ASSISTANTS KA70S B371 Facility Disposition 50.91 Dollars Linear 56 Dollars Factors

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Skill Skill					Department	Curve	Quantity	Units
[CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.272.27	Dollars
-	Factors	1272.27 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	486.45	Dollars

Factors 486.454 Dollars

4	Activity ID: 1AD	0016B30	Description: Set 16 - Ancillary Bldgs Site	Support			Cost Risk	1 Schedule F	Risk	1

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
16B30	Set 16 Site Support	1.00	each	HC	136	136	2.971	18.515	0	21.486	1.028	22.514
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.242	6.242	0	6.242
"	Tot	Total for Activity 1AD0016B30:				136	2.971	18.515	6.242	27.728	1.028	28.755

Line Item 16B30 - Set 16 Site Support

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Support Services

Breakdown of Historical Data:

Item - Support Services

Units - 1 lot

Unit Cost - 93 hrs, \$12,490 subcontracts, \$840 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 160 hrs, \$21,520 subcontracts, \$1,447 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

0.90907 CA AAD Adjustment Factor

WBS No: 1AAD Activity ID: 1AD0016B30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Starts In FY

0.90907 CA AAD Adjustment Factor

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions. 3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Ouantity Units
L	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	32.73 Hours
1	Factors	36 Hours						
		1	_				0.90907 CA AAD Adi	ustment Factor
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	88.18 Hours
1	Factors	97 Hours						
г		Т			1		0.90907 CA AAD Adi	ustment Factor
L	750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	15.45 Hours
1	Factors	17 Hours						
г		T					0.90907 CA AAD Adi	
L	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	1.166.34 Dollars
I	Factors	1283 Dollars						
Г		T					0.90907 CA AAD Adi	
L	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	16.842.32 Dollars
1	Factors	18527 Dollars						<u></u> .
Г		T		T			0.90907 CA AAD Adi	
L		SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	144.54 Dollars
1	Factors	159 Dollars						<u></u> .
Г		T		T	T		0.90907 CA AAD Adi	
L		SUBCONTRACTED SRVS	E120	SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	144.54 Dollars
1	Factors	159 Dollars						_
г		1					0.90907 CA AAD Adj	
L	A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	217.27 Dollars
1	Factors	239 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element Skill					Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	4.515.37	Dollars
_	Factors	4515.37 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.726.46	Dollars

1726.46 Dollars Factors

cillary Bldgs - Dismantlemer

Activity ID: 1AD	Activity ID: 1AD0016L10 Description: Set 16 - Ancillary Bldgs - Dismantlement Cost Risk 2 Schedule Risk 3											
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		1
1AQ376X550	Dismantlement - A5C only	1.00	ea	HC	0	0	0	848	0	848	0	848
Building Trades	Building Trade Crew of 8 (30d x 1crew)	30.00	dav	EE	0	0	0	117.815	0	117.815	0	117.815
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	33.228	33.228	0	33.228
	Total for Activity 1AD0016L10: 0						0	118.663	33.228	151.892	0	151.892

Line Item 1AQ376X550 - Dismantlement - A5C only

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Dismantlement

Breakdown of Historical Data:

Item - Dismantlement

Page 101 of 135 6/22/00 8:38:56 PM OFFICIAL USE ONLY WBS No: 1AAD Activity ID: 1AD0016L10

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Units - 1 lot

Unit Cost - 148 hrs, \$32,477 subcontracts, \$541 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 255 hrs, \$55,958 subcontracts, \$933 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006
- to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	848.16	Dollars

Factors 933 Dollars

0.90907 CA AAD Adjustment Factor

Line Item Building Trades - Building Trade Crew of 8 (30d x 1crew)

BOE

Estimators Experience - This BOE was developed using a team of Subject Matter Experts (SMEs)including the B771 D&D Manager, B771 Operations Manager, B371 D&D Team and B371 Engineers familiar with the operations and management of B371. Set areas were reviewed and experience associated with B771 D&D activities was used as a template to develop the B371 estimate. Scope was broken out by Steelworker support and Building Trade support. A standard crew of 15 people were developed for the Steelworker support (1-foreman; 5-RCTs; 9-D&D workers). A Standard crew of 8 people were developed for the Building Trade (1-foreman; 4-pipefitters; 2-laborers; 1-RCT).

Experience Item Desc - Dismantlement of Set 1 Attic/Chem Makeup

Breakdown of Cost Data:

Item - Building Trades Support

Units - 1 Crew @ 8 people per crew x 30 days

Unit Adjustment factor - .9090688 reduction per management directive.

Description: Set 16 - Ancillary Bldgs - Decontamination

Basis for adjustment - Adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es			Cost Element			Skill			Department	Curve		Ouantity	Units
	A5B	CONSTRU	JCTION	C080	PLUMBER	RS AND PIPEFITTERS	KA70H	371 Fa	cility Disposition Steelworkers	Linear		1.963.59	Dollars
	Factors	4	Pipe Fitters		9	hours a day		60	\$/hr				
										0.90907 CA	AAD Adjustm	ent Factor	
	A5B	CONSTRU	JCTION	L090	GENERAL	LABORER	KA70H	371 Fa	cility Disposition Steelworkers	Linear		981.79	Dollars
	Factors	2	Laborers		9	hours a day		60	\$/hr				
										0.90907 CA	AAD Adjustm	ent Factor	
	A5B	CONSTRU	JCTION	M010	FOREMEN	N / TEAM LEADS / GROUP	KA70S	B371 F	acility Disposition	Linear		490.90	Dollars
	Factors	1	Foreman		9	hours a day		60	\$/hr				
										0.90907 CA	AAD Adjustm	ent Factor	
	A5B	CONSTRU	JCTION	T050	RADIATIO	N CONTROL TECHNOLIGI	KA70H	371 Fa	cility Disposition Steelworkers	Linear		490.90	Dollars
	Factors	1	RCT		9	hours a day		60	\$/hr				
										0.90907 CA	AAD Adjustm	ent Factor	

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	24.128.61 Dollars
	Factors 24128.6 Dollars				
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	9,099.74 Dollars

Factors 9099.74 Dollars

_													
	Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
					T	II	T	T-4-1	Cant	0 Ennalmaine	Cant	1	

2 Schedule Risk

Cost Risk

WBS No: 1AAD Proiect **Rocky Flats Closure Project** Activity ID: 1AD0016L20 WBS Filter **Baseline Cost and Basis of Estimate**

	1	1	1 ype	nours/Unii	1 otat	10tai Acti	vity Fifter *	& Escaianon	Cosi Stai	rts In FY	
16L20	Set 16 Decontamination	1.00 each	HC	55	55	1.640	43.561	0	45.201	567	45.768
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	12.816	12.816	0	12.816
	Tot	al for Activity 1AD	00016L20:		55	1.640	43.561	12.816	58.017	567	58.584

Line Item 16L20 - Set 16 Decontamination

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Decontamination

Breakdown of Historical Data:

Item - Decontamination

Units - 1 lot

Unit Cost - 89 hrs, \$27,246 subcontracts, \$576 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 153 hrs, \$46,945 subcontracts, \$992 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%
- 2nd Unit Cost Adjustment factor approximately a 22% adjustment due to first target reductions.

 3rd Unit Cost Adjustment factor approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		. Skill		Department	Curve	Ouantity Units
750 STRAIGHT TIME BASE	C120	D&D SKILLED TRADES	KA70H	371 Facility Disposition Steelworkers	Linear	14.55 Hours
Factors 16 hours						
			T		0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	36.36 Hours
Factors 40 hours						
			1		0.90907 CA AAD A	diustment Factor
750 STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	4.55 Hours
Factors 5 hours						
			1		0.90907 CA AAD A	diustment Factor
A5B CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	34.275.53 Dollars
Factors 37704 dollars						
			,		0.90907 CA AAD A	diustment Factor
A5C SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	901.80 Dollars
Factors 992 dollars						
			,		0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	8.197.07 Dollars
Factors 9017 dollars - Site Prep						
					0.90907 CA AAD A	diustment Factor
A5H SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	186.36 Dollars
Factors 205 dollars						
					0.90907 CA AAD A	djustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
L	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	9,306.29	Dollars
_	Factors	9306.29 Dollars							
Į	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3,509.73	Dollars
	Factors	3509.73 Dollars							

Baseline Devl

1AAD

WBS No: 1AAD Activity ID: 1AD0016L30

Line Item

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter

1 398

Baseline Devl 1AAD

Starts In FY

8 026

Activity ID:	1AD0016L30	Description:	Set 16 - Ancillary Bldgs - Fina	al Surve

Description: Set 16 - Ancillary Bldgs - Fin	al Survey						Cost Risk	2 Schedule F	Risk 3		
Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
Set 16 Final Survey	1.00	each	HC	60	60	1.398	4.389	0	5.786	484	6.270
Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.756	1.756	0	1.756

Line Item 16L30 - Set 16 Final Survey

BOE

16L30 SYS

> Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Final Survey

Breakdown of Historical Data:

Item - Final Survey

Units - 1 lot

Unit Cost - 66 hrs, \$4,445 subcontracts, \$374 supplies

Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 114 hrs, \$7,658 subcontracts, \$645 supplies

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

Total for Activity 1AD0016L30:

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

2nd Unit Cost Adjustment factor - approximately a 22% adjustment due to first target reductions.

3rd Unit Cost Adjustment factor - approximately a 10% adjustment due to a second target reduction.

Note: The 1st Unit Cost Adjustment factor of 1.723 was the original Basis of Estimate prior to the revised target reductions. 2nd and 3rd djustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Ouantity Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	11.36 Hours
	Factors	12.5 Hours						
							0.90907 CA AAD Ad	iustment Factor
	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	48.64 Hours
	Factors	53.5 Hours						

						0.90907 CA AAD Adiu	stment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	340.90 Dollars
Factors	275 Dollars						

0.90907 CA AAD Adjustment Factor KA70S B371 Facility Disposition 4.047.63 Dollars SUBCONTRACTED SRVS 0000 NONE

4452.5 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY 0000 NONE		ZDEP	No Department	Linear	1.274.95	Dollars
	Factors	1274.95 Dollars						
	ESC	ESCALATION	0000 NONE	ZDEP	No Department	Linear	480.83	Dollars

480.827 Dollars

Activity ID: 1AD11BAJ10 Description: P&E Support to Breathing Air Compressors Cost Risk 2 Schedu	Air Compressors Cost Risk 2 Schedule Risk
ACTIVITY ID. TADTIBATIO Description: FAE Support to Bleatified All Complessors	AIR Compressors Cost Risk 2 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
BA10	P&E Breathing Air Compressor	1.00	ea	EE	0	0	0	27.272	0	27.272	0	27.272
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.458	1.458	0	1.458

Rockv Flats Closure Proiect Proiect Baseline Cost and Basis of Estimate Proiect WBS Filter 1AAD

Baseline Cost and Basis of Estimate

Activity Filter *

Line Item BA10 - P&E Breathing Air Compressor

1AAD

1AD11BAJ10

BOE

WBS No:

Activity ID:

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar breathing air activities planned in B771.

Experience Them Dags - Planning & Engineering support to the progressing of Breathing Air Compressors to support Size Pedugtion in the LTC II Chambers and

Experience Item Desc - Planning & Engineering support to the procurement of Breathing Air Compressors to support Size Reduction in the ITC II Chambers and

for In Place Size Reduction efforts.

Breakdown of Cost Data: Item - Planning and Engineering

Units - 1 lot

Unit Cost - \$30,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Total for Activity 1AD11BAJ10:

Resources

rces		Cost Element		Skill		Department	Curve	Ouantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	27,272.06	Dollars

Factors 30000 dollars

0.90907 CA AAD Adjustment Factor

1.458

Starts In FY

28.731

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	884.98	Dollars
	Factors	884.977 Dollars							
	ESC	ESCALATION	0000	NONE	7DEPT	No Department	Linear	573 47	Dollars

Factors 573.471 Dollars

Activity ID: 1AD11BAJ20

Description: P&E Support to Breathing Air System

Cost Risk	2	Schedule R	Pisk 2	
 14	0		m . In .	n 1

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
BA20	P&E Breathing Air System	1.00	each	EE	0	0	0	63.635	0	63.635	0	63.635
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3,403	3.403	0	3.403
Total for Activity 1AD11BAJ20:							0	63.635	3.403	67.038	0	67.038

Line Item BA20 - P&E Breathing Air System

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar breathing air activities planned in B771.

Experience Item Desc - Planning & Engineering support to the installation of a Breathing Air System to support Size Reduction in the ITC II Chambers and for In Place Size Reduction efforts.

Breakdown of Cost Data:

Item - Planning and Engineering

Units - 1 lot

Unit Cost - \$70,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	63,634.82	Dollars

Factors 70000 dollars

0.90907 CA AAD Adjustment Factor

WBS No: 1AAD Activity ID: 1AD11BAJ20

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Ouantity Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	2.064.95 Dollars
	Factors 2064.95 Dollars				
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	1.338.10 Dollars

Factors 1338.1 Dollars

Activity ID: 1AD	11BAJ30 Description: Purchase of Air Compressor			Cost Risk	3 Schedule K	ask 1						
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
BA30	Purchase of Air Compress and misc.	1.00	each	EE	0	0	0	227.267	0	227.267	0	227.267
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	12.265	12.265	0	12.265
Total for Activity 1AD11BAJ30:							0	227.267	12.265	239.533	0	239.533

Line Item BA30 - Purchase of Air Compress and misc.

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar breathing air activities planned in B771.

Experience Item Desc - Procurement of the Air Compressors and Ancillary Equipment in support of the installation of a secondary Breathing Air System to support Size Reduction in the ITC II Chambers and for In Place Size Reduction efforts. Breakdown of Cost Data:

Item - Air Compressor and Ancillary Equipment

Units - 1 lot

Unit Cost - \$250,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element Skill			Department	Curve	Quantity	Units	
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	227.267.20	Dollars

250000 dollars Factors

Line Item SYS - Contingency And Escalation

0.90907 CA AAD Adjustment Factor

BOE

Resources

es		Cost Element	Skill	Department	Curve	Quantity Units	
	CON	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	7.486.37 Dollars	
	Factors	7486.37 Dollars					_
	FSC	ESCALATION	0000 NONE	ZDEPT No Department	Linear	4 778 92 Dollars	

4778.92 Dollars

Activity ID:	1AD11BAJ40	Description:	Installation of Breathing Air System	
ACHIVITY ID.	IADIIDAUTU	Description.	installation of breathing All System	

Activity ID: 1AD	11BAJ40 Description: Installation of Breathing Air S	System						Cost Risk	2 Schedule R	Pisk 2		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
BA40	Installation of Breathing Air Svs	1.00	each	EE	0	0	0	727.255	0	727.255	0	727.255
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	38.892	38.892	0	38.892
	Total for Activity 1AD11BAJ40:					0	0	727.255	38.892	766.147	0	766.147

Line Item BA40 - Installation of Breathing Air Sys

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar breathing air activities planned in B771.

Experience Item Desc - Installation of the Breathing Air System to support Size Reduction in the ITC II Chambers and for In Place Size Reduction efforts. Breakdown of Cost Data:

Item - Breathing Air System

Units - 1 lot

WBS No: 1AAD Activity ID: 1AD11BAJ40

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter 1AAD Activity Filter

Baseline Devl

Starts In FY *

Unit Cost - \$800,000 Unit Cost Adjustment factor - N/A Revised Unit Cost - N/A Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

Ces Cost Element	Cost Element	Skill			Department	Curve	Quantity	Units	
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	727.255.10	Dollars

Factors 800000 dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

Skill Skill				Department	Curve	Quantity	Units	
CO	N CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	23.599.39	Dollars
Facto	rs 23599.4 Dollars	-				·		
ES	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	15.292.55	Dollars

Factors 15292.6 Dollars

tion S	SO T	estina	οf	Breathing	Air	System
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O C.I. I.I. D.I.

ACTIVITY ID: TAD	Description: SO Testing of Breatning Air	System						Cost Risk	2 Scheaule F	ask Z		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
BA50	SO Testing of Breathing Air Svs	1.00	each	EE	0	0	0	72.726	0	72.726	0	72.726
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3.889	3.889	0	3.889
Total for Activity 1AD11BAJ50:						0	0	72.726	3.889	76.615	0	76.615

Line Item BA50 - SO Testing of Breathing Air Sys

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar breathing air activities planned in B771.

Experience Item Desc - SO Testing of the Breathing Air System to support Size Reduction in the ITC II Chambers and for In Place Size Reduction efforts. Breakdown of Cost Data:

Item - SO Testing

Units - 1 lot Unit Cost - \$80,000

Unit Cost Adjustment factor - N/A Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill	Department	Curve	Ouantity	Units
	A5H	SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	72.725.51	Dollars

80000 dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element Skill				Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.359.94	Dollars
_	Factors	2359.94 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.529.25	Dollars

Factors 1529.26 Dollars

Activity ID: 1AD11SRK10

Description: P&E Support to ITC II Size Reduction Equipment

Cost Risk

2 Schedule Risk

WBS No: 1AAD Activity ID: 1AD11SRK10

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

					= u.c.c c		Acti	ivity Filter *		Sta	arts In FY *	
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SR10	P&E Support to SR Equip	1.00	each	EE	0	0	0	181.814	0	181.814	0	181.814
SR10a	P&E Support to SR Equip - for 2nd	1.00	each	EE	0	0	0	181.814	0	181.814	0	181.814
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	19.446	19.446	0	19.446
	Tot	al for Activi	ty 1AD11SR	K10:		0	0	363.628	19.446	383.074	0	383.074

Line Item SR10 - P&E Support to SR Equip

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Planning and Engineering support to the procurement and installation of 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currently being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Planning and Engineering

Units - 1 lot

Unit Cost - \$200,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces	Cost Element	Skill	Department	Curve	Quantity Units
	A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	181.813.80 Dollars

Factors 200000 dollars

Line Item SR10a - P&E Support to SR Equip - for 2nd

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Planning and Engineering support to the procurement and installation of 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currently being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Planning and Engineering

Units - 1 lot

Unit Cost - \$200,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces	Cost Element			Skill	Department		Curve	Ouantity	Units
Į	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	181.813.80	Dollars

Factors 200000 dollars

Line Item SYS - Contingency And Escalation

0.90907 CA AAD Adjustment Factor

BOE

Resources	Resources Cost Element		Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY		NONE	ZDEPT No Department	Linear	11.799.69 Dollars	
	Factors 11799.7 Dollars						
	ESC ESCALATION	0000	NONE	ZDEPT No Department	Linear	7,646.27	Dollars
	Factors 7646.27 Dollars						

WBS No: 1AAD Activity ID: 1AD11SRK20

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl

WBS Filter 1AAD Activity Filter

Starts In FY

Activity ID: 1AD	tivity ID: 1AD11SRK20 Description: Purchase of 2 ITC II Size Reduction Equipment								Cost Risk 2 Schedule Risk 2				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
SR20	Purchase of 1 ITC II SR	1.00	each	EE	0	0	0	272.721	0	272.721	0	272.721	
SR20a	Purchase of 2nd ITC II	1.00	each	EE	0	0	0	272.721	0	272.721	0	272.721	
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	29.169	29.169	0	29.169	
	Total for Activity 1AD11SRK20:					0	0	545.441	29.169	574.610	0	574.610	

Line Item SR20 - Purchase of 1 ITC II SR

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Procurement of 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currenlty being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Procurement of 1 ITC II System

Units - 1 lot

Unit Cost - \$300,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve	Ouantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	272.720.70	Dollars

Factors 300000 dollars

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Procurement of 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currenlty being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Procurement of 1 ITC II System

Units - 1 lot

Line Item SR20a - Purchase of 2nd ITC II

Unit Cost - \$300,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces	Cost Element	Skill	Department	Curve	Quantity Units
	A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	272.720.70 Dollars

300000 dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

s	Cost Element	Skill	Department	Curve	Quantity	Units
С	ON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	17,699.54	Dollars
Fac	tors 17699.5 Dollars					

WBS No: 1AAD Activity ID: 1AD11SRK20

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

ZDEPT No Department

Proiect Baseli
WBS Filter 1AAD

Baseline Devl

Linear

0000 NONE

WBS Filter Activity Filter

Starts In FY * 11.469.41 Dollars

2

Factors 11469.4 Dollars

ESC ESCALATION

Activity ID:	1AD11SRK30	Description: Purchase of Support Equipment to ITC II SR	Equip
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Cost Risk 2 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SR30	Purchase of Support Equip to SR	1.00	each	EE	0	0	0	454.534	0	454.534	0	454.534
SR30a	Purchase of SE to SR for 2nd	1.00	each	EE	0	0	0	454.534	0	454.534	0	454.534
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	48.615	48.615	0	48.615
	Tot	Total for Activity 1AD11SRK30:				0	0	909.069	48.615	957.684	0	957.684

Line Item SR30 - Purchase of Support Equip to SR

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in toyeland Colorado.

Experience Item Desc - Procurement of support equipment such as robotics, plasma, ventilation system, tools, etc., for 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currently being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data: Item - Support Equipment

Units - 1 lot

Unit Cost - \$500,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces	Cost Element	Skill	Department	Curve	Ouantity Units
	A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	454.534.40 Dollars

Factors 500000 dollars

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Procurement of support equipment such as robotics, plasma, ventilation system, tools, etc., for 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currently being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Support Equipment

Units - 1 lot

Line Item SR30a - Purchase of SE to SR for 2nd

Unit Cost - \$500,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management
Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s		Cost Element		Skill	Department	Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S B371 Facility Disposition	Linear	454.534.40	Dollars

Factors 500000 dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

-						
_						
Resources	Cost Flament	Cl-ill	Danartmant	Curve	Quantity	
	Cost Element	Skiii	Department	Curve	Quantity	Unus

WBS No: 1AAD Activity ID: 1AD11SRK30

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseli WBS Filter 1AAD

Baseline Devl

		Ac	tivity Filter	Starts In FY
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	29.499.23 Dollars
Factors 29499.2 Dollars				
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	19 115 68 Dollars

Factors 19115.7 Dollars

Activity ID: 1AD11SRK40 Description: Installation of the ITC II Size Reduction Equip

Cost Risk

2 Schedule Risk

ACTIVITY ID. TAD	VID. 1AD113RR40 Description: Installation of the ITC if Size Reduction Equip								Cost Risk 2 Schedule Risk 2				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
SR40	Installation of SR Equip	1.00	each	EE	0	0	0	272.721	0	272.721	0	272.721	
SR40a	Installation of 2nd SR Equip	1.00	each	EE	0	0	0	272.721	0	272.721	0	272.721	
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	57.048	57.048	0	57.048	
	To	tal for Activ	ity 1AD11SE	2K40·		0	0	545 441	57 048	602 489	0	602 489	

Line Item SR40 - Installation of SR Equip

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Toyeland Colorado.

Experience Item Desc - Installation of 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currently being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Installation of 1 ITC II System

Units - 1 lot.

Unit Cost - \$300,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill			Department	Curve		Quantity	Units	J
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Lin	ear	272.720.70	Dollars	J

Factors 300000 dollars

0.90907 CA AAD Adjustment Factor

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Installation of 1 - Inner Tent Chambers (ITC) - Type II size reduction system similar to the one currently being fabricated in Loveland Colorado for B771.

Breakdown of Cost Data:

Item - Installation of 1 ITC II System

Units - 1 lot

Line Item SR40a - Installation of 2nd SR Equip

Unit Cost - \$300,000

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	Cost Element	Skill	Department	Curve	<i>Ouantity</i>	Units
	A5H SUBCONTRACTED SRVS	0000 NONE	KA70S B371 Facility Disposition	Linear	272.720.70 D	ollars

Factors 300000 dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation BOE

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WBS No: 1AAD **Rocky Flats Closure Project** Activity ID: 1AD11SRK40 **Baseline Cost and Basis of Estimate**

Proiect WBS Filter Activity Filter

Baseline Devl 1AAD

Linear

Starts In FY

19.375.34 Dollars

Resources

0000 NONE

Train/Ouglification of Croft ITC II CD Faulin

s		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	37.672.42	Dollars
	Factors	37672.4 Dollars					· ·	•	·

ZDEPT No Department

ESC ESCALATION 19375.3 Dollars

Activity ID: 1AD11SRK50 Description: Development of Procedures - ITC II SR Equip Cost Risk 2 Schedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SR50	Procedures - SR	1.00	each	EE	0	0	0	227.267	0	227.267	0	227.267
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	34.318	34.318	0	34.318
	Total for Activity 1AD11SRK50:						0	227.267	34.318	261.585	0	261.585

Line Item SR50 - Procedures - SR

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in

Experience Item Desc - Development of procedures including operating procedures, crit evaluations, nuclear safety review, development of crit limits, etc., in support of the installation of 2 - Inner Tent Chambers (ITC) - Type II size reduction systems similar to the one being fabricated in Loveland Colorado for

Breakdown of Cost Data: Item - Procedure development Units - 1 lot Unit Cost - \$250,000 Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	227.267.20	Dollars

Factors 250000 dollars

0.90907 CA AAD Adjustment Factor

2 C.L. L.L. D.L.

Line Item SYS - Contingency And Escalation

Resource

BOE

ces		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	23.697.52	Dollars
	Factors	23697.5 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	10.620.52	Dollars

10620.5 Dollars Factors

ACTIVITY ID: TAD	Description: Train/Qualification of Craft -	IIC II SK	Equip					Cost Risk	2 Schedule K	(isk 2		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SR60	Train/qual Craft for SR	1.00	each	EE	0	0	0	227.267	0	227.267	0	227.267
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	34.318	34.318	0	34.318
	Tot	al for Activ	ity 1AD11SF	K60.		0	0	227 267	34 318	261 585	0	261 585

Line Item SR60 - Train/qual Craft for SR

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Training and qualification of operators to operate the Inner Tent Chambers (ITC) - Type II size reduction system. Breakdown of Cost Data:

Item - Training/Qualification support

Units - 1 lot

Page 112 of 135 6/22/00 8:39:02 PM OFFICIAL USE ONLY WBS No: 1AAD Activity ID: 1AD11SRK60

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect | WBS Filter | Activity Filter | 1

Baseline Devl 1AAD

Starts In FY *

Unit Cost - \$250,000 Unit Cost Adjustment factor - N/A Revised Unit Cost - N/A Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	227.267.20	Dollars

Factors 250000 dollars

0.90907 CA AAD Adjustment Factor

3

Line Item SYS - Contingency And Escalation

BOE

Resources

es	Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
CO	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	23.697.52	Dollars
Facto	rs 23697.5 Dollars							
ESC		0000	NONE	ZDEPT	No Department	Linear	10.620.52	Dollars

Factors 10620.5 Dollars

Activity ID: 1AD11SRK70

ription: Management Review - ITC II SR Equip	Cost Risk	2 S	Schedule Risk	
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Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
SR70	Mamt Review - SR	1.00	each	EE	0	10101	10101	272.721	& Escaration 0	272.721	0	272.721
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	41.182	41.182	0	41.182
Total for Activity 1AD11SRK70:							0	272.721	41.182	313.902	0	313.902

Line Item SR70 - Mgmt Review - SR

BOE

Estimators Experience - Larry Rosebrock is a B371 project manager with extensive building management and demolition experience in B771. This cost estimate is based on similar size reduction activities planned in B771. A size reduction system for B771 is currently being fabricated at the S. A. Robotics in Loveland Colorado.

Experience Item Desc - Management review of the 2 - Inner Tent Chambers (ITC) - Type II size reduction systems. Management review will include oversight team analysis, operator and RCT interviews for verification of qualification, etc.

Breakdown of Cost Data:

Item - Management Review
Units - 1 lot
Unit Cost - \$300,000
Unit Cost Adjustment factor - N/A
Revised Unit Cost - N/A
Basis for adjustment - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element		Skill		Department	Curve	Ouantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	272,720,70	Dollars

Factors 300000 dollars

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000	NONE	ZDEPT No Department	Linear	28.437.02	Dollars
_	Factors 28437.0 Dollars						
	ESC ESCALATION	0000	NONE	ZDEPT No Department	Linear	12.744.63	Dollars
	Factors 12744.6 Dollars						

WBS No: 1AAD Activity ID: 1AD16A0001

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD

Activity Filter

Starts In FY

Activity ID: 1AD16A0001 Description: B371 Project Management (01)- Decommissioning Cost Risk 1 Schedule Risk 1												
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
D&D PM FY01	D&D FY01 Project Management	1.00	each	EE	4.550	4.550	209.673	144.840	0	354.513	100.014	454.527
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	24.097	24.097	0	24.097
	Tot	al for Activ	ity 1AD16A0	001:		4.550	209.673	144.840	24.097	378.610	100.014	478.624

Line Item D&D PM FY01 - D&D FY01 Project Management

BOE

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Experience Item Desc - Program Management consists of a Program Manager and three Leads for the major activities in Deactivation. The Program Manager should have a person to do administrative work as the scope of the operations would warrant such additional responsibilities. Each of the three major activities will have to have a lead to assure the work is accomplished and to manage the personnel issues of those assigned salaried, hourly, or contracted services. Each lead will need a technically qualified support engineer to work on issues and problems that will occur daily in the performance of tasks associated with the activity. Additionally, the technical engineers will have to work together on many unknowns that will surface during the deactivation tasks. Because of the newness of the tasks that are going to be done in deactivation, it is probable that some travel to other DOE or nuclear sites will be necessary to determine how efficiencies from similar work can be captured for B371 Deactivation work. As there is a great deal of planning involved, off site meeting to support large numbers or personnel or lengthy sessions will also occasionally be necessary. As this is a new process and many unknowns are expected, it is likely that outside contractors will be required to solve specific problems or that a new technology will arise to speed up the process, make it safer or simpler, or that a contractor will be used to perform a task within the activity.

Breakdown of Cost Data:

Item - Program Management for Deactivation

Units - Lot

Unit Cost - 1,822.5 hrs \$88,930 - Sub Costs \$4,184 - Supply Costs

Unit Cost Adjustment factor - N/A

Resources

es		Cost Element				Skill		Department	(Curve	Quantity	Units
	750	STRAIGHT TIME BASE	(G010	ADMINIS'	TRATIVE ASSISTANTS	KA70S	B371 Facility Disposition		inear	910.00	Hours
d	Factors	1820 Hours (Oct-Sep)	Sallv		0.5	1/2 time support						
L	750	STRAIGHT TIME BASE		M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	L	inear	910.00	Hours
ď	Factors	1820 Hours (Oct-Sep)	Maiestic	ı	0.5	1/2 time support						
L	750	STRAIGHT TIME BASE		M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	L	inear	910.00	Hours
d	Factors	1820 Hours (Oct-Sep)	Floerke		0.5	1/2 time support						
L	750	STRAIGHT TIME BASE		M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	L	inear	910.00	Hours
d	Factors	1820 Hours (Oct-Sep)	Chavez		0.5	1/2 time support						
L	750	STRAIGHT TIME BASE		M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	L	inear	910.00	Hours
d	Factors	1820 Hours (Oct-Sep)	Wrapp		0.5	1/2 time support						
L	A52	TENERA		P070	COST ES	TIMATORS PLANNERS AN	KA70S	B371 Facility Disposition	L	inear	132,288.00	Dollars
d	Factors	11024 \$/month			12	months						
L	A5C	SUPPLIES		0000	NONE		KA70S	B371 Facility Disposition	L	inear	12,552.00	Dollars
1	Factors	1046 \$/month			12	months						

Line Item SYS - Contingency And Escalation

BOE

Resources

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	14.539.38	Dollars
	Factors	14539.4 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	9.557.69	Dollars

9557.69 Dollars Factors

Activity ID:	1AD16A0002	Description: B371 Project Management (02)- Decommissioning

Activity ID: 1AI	D16A0002 Description: B371 Project Management (02)- Decom	nmissioning					Cost Risk	1 Schedule R	isk 1		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
D&D PM FY02	D&D FY02 Project Management	1.00	each	EE	4.550	4.550	209.673	144.840	0	354.513	74.015	428.528
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	64.049	64.049	0	64.049
	Tot	al for Activi	tv 1AD16A0	002.		4 550	209 673	144 840	64 049	418 562	74 015	492 577

WBS No: 1AAD
Activity ID: 1AD16A0002

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY

Line Item D&D PM FY02 - D&D FY02 Project Management

BOE

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Experience Item Desc - Program Management consists of a Program Manager and three Leads for the major activities in Deactivation. The Program Manager should have a person to do administrative work as the scope of the operations would warrant such additional responsibilities. Each of the three major activities will have to have a lead to assure the work is accomplished and to manage the personnel issues of those assigned salaried, hourly, or contracted services. Each lead will need a technically qualified support engineer to work on issues and problems that will occur daily in the performance of tasks associated with the activity. Additionally, the technical engineers will have to work together on many unknowns that will surface during the deactivation tasks. Because of the newness of the tasks that are going to be done in deactivation, it is probable that some travel to other DOE or nuclear sites will be necessary to determine how efficiencies from similar work can be captured for B371 Deactivation work. As there is a great deal of planning involved, off site meeting to support large numbers or personnel or lengthy sessions will also occasionally be necessary. As this is a new process and many unknowns are expected, it is likely that outside contractors will be required to solve specific problems or that a new technology will arise to speed up the process, make it safer or simpler, or that a contractor will be used to perform a task within the activity.

Breakdown of Cost Data:

Item - Program Management for Deactivation

Units - Lot

Unit Cost - 1,822.5 hrs \$88,930 - Sub Costs \$4,184 - Supply Costs

Unit Cost Adjustment factor - N/A

Resources

ces		Cost Elem	nent			Skill		Department	Curve	Ouantity	Units
	750	STRAIGHT TIME I	BASE	G010	ADMINISTR	ATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	910.00	Hours
	Factors	1820 Hours	(Oct-Sep) Sallv		0.5 1	/2 time support					
	750	STRAIGHT TIME I	BASE	M020	MANAGERS	(GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00	Hours
	Factors	1820 Hours	(Oct-Sep) Wrapp		0.5 1	/2 time support					
	750	STRAIGHT TIME I	BASE	M020	MANAGERS	(GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00	Hours
	Factors	1820 Hours	(Oct-Sep) Maiestic		0.5 1	/2 time support		T			,
	750	STRAIGHT TIME I	BASE	M020	MANAGERS	(GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00	Hours
	Factors	1820 Hours	(Oct-Sep) Floerke		0.5 1	/2 time support		T			,
	750	STRAIGHT TIME I	BASE	M020	MANAGERS	(GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00	Hours
	Factors	1820 Hours	(Oct-Sep) Chavez		0.5 1	/2 time support		T			,
	A52	TENERA		P070	COST ESTIN	MATORS PLANNERS AN	KA70S	B371 Facility Disposition	Linear	132.288.00	Dollars
	Factors	11024 \$/mor	nth		12 r	nonths		T			,
	A5C	SUPPLIES		0000	NONE		KA70S	B371 Facility Disposition	Linear	12.552.00	Dollars
	Factors	1046 \$/mor	nth		12 n	nonths					

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	44.023.43	Dollars
	Factors	44023.4 Dollars			•		·	•	·
		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	20.025.72	Dollars

Factors 20025.7 Dollars

ACTIVITY ID: TAD	Activity ID: 1AD16A0003 Description: B3/1 Project Management (03)- Decommissioning Cost Risk 1 Schedule Risk 1											
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
D&D PM FY03	D&D FY03 Project Management	1.00	each	EE	4.550	4.550	209.673	144.840	0	354.513	72.547	427.060
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	118.401	118,401	0	118.401
	Tot	al for Activi	ity 1AD16A0	003:		4.550	209.673	144.840	118.401	472.914	72.547	545.461

Line Item D&D PM FY03 - D&D FY03 Project Management

BOE

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Experience Item Desc - Program Management consists of a Program Manager and three Leads for the major activities in Deactivation. The Program Manager should have a person to do administrative work as the scope of the operations would warrant such additional responsibilities. Each of the three major activities will have to have a lead to assure the work is accomplished and to manage the personnel issues of those assigned salaried, hourly, or contracted services. Each lead will need a technically qualified support engineer to work on issues and problems that will occur daily in the performance of tasks associated with the activity. Additionally, the technical engineers will have to work together on many unknowns that will surface during the deactivation tasks. Because of the newness of the tasks that are going to be done in deactivation, it is probable that some travel to other DOE or nuclear sites will be necessary to

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WBS No: 1AAD Activity ID: 1AD16A0003

Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

determine how efficiencies from similar work can be captured for B371 Deactivation work. As there is a great deal of planning involved, off site meeting to support large numbers or personnel or lengthy sessions will also occasionally be necessary. As this is a new process and many unknowns are expected, it is likely that outside contractors will be required to solve specific problems or that a new technology will arise to speed up the process, make it safer or simpler, or that a contractor will be used to perform a task within the activity.

Breakdown of Cost Data:

Item - Program Management for Deactivation

Units - Lot

Unit Cost - 1,822.5 hrs \$88,930 - Sub Costs \$4,184 - Supply Costs

Unit Cost Adjustment factor - N/A

Resources

s		Cost Element		Skill		Department	Curve	Quantity Units
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	910.00 Hours
i.	Factors	1820 Hours (Oct-Sep) Sally		0.5 1/2 time support				
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00 Hours
	Factors	1820 Hours (Oct-Sep) Chavez		0.5 1/2 time support				
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00 Hours
	Factors	1820 Hours (Oct-Sep) Wrapp		0.5 1/2 time support				
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00 Hours
	Factors	1820 Hours (Oct-Sep) Maiestic		0.5 1/2 time support				
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	910.00 Hours
i.	Factors	1820 Hours (Oct-Sep) Floerke		0.5 1/2 time support				
	A52	TENERA	P070	COST ESTIMATORS PLANNERS AN	KA70S	B371 Facility Disposition	Linear	132.288.00 Dollars
	Factors	11024 \$/month		12 months				
	A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	12.552.00 Dollars
	Factors	1046 \$/month		12 months				

Line Item SYS - Contingency And Escalation

BOE

Resources

Line Item

D&D PM FY04

es		Cost Element		Skill		Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	85.651.78	Dollars
	Factors	85651.8 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	32.749.21	Dollars

Labor

Hours/Unit

10.920

Λ

BOE

Type

EE

EE

Factors 32749.2 Dollars

Activity ID: 1AD16A0004

Description: B371 Project Management (04)- Decommissioning

Cost Risk 1 Schedule Risk

Materials/ Sub

Cost

157,392

157.392

0

Labor Cost

Total

471,162

471.162

Labor Hours

Total

10,920

10.920

0

Contingency	Total Prime	Burden Cost	Total Cost
& Escalation	Cost		
0	628,554	132,868	761,421
108,721	108,721	0	108,721
108,721	737,275	132,868	870,142

Starts In FY

Line Item D&D PM FY04 - D&D FY04 Project Management

D&D FY04 Project Management

Contingency And Escalation

BOE

SYS

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Units

Ouantity

1.00 each

Total for Activity 1AD16A0004:

1.00 ea

Experience Item Desc - Program Management consists of a Program Manager and three Leads for the major activities in Deactivation. The Program Manager should have a person to do administrative work as the scope of the operations would warrant such additional responsibilities. Each of the three major activities will have to have a lead to assure the work is accomplished and to manage the personnel issues of those assigned salaried, hourly, or contracted services. Each lead will need a technically qualified support engineer to work on issues and problems that will occur daily in the performance of tasks associated with the activity. Additionally, the technical engineers will have to work together on many unknowns that will surface during the deactivation tasks. Because of the newness of the tasks that are going to be done in deactivation, it is probable that some travel to other DOE or nuclear sites will be necessary to determine how efficiencies from similar work can be captured for B371 Deactivation work. As there is a great deal of planning involved, off site meeting to support large numbers or personnel or lengthy sessions will also occasionally be necessary. As this is a new process and many unknowns are expected, it is likely that outside contractors will be required to solve specific problems or that a new technology will arise to speed up the process, make it safer or simpler, or that a contractor will be used to perform a task within the activity.

Breakdown of Cost Data:

Item - Program Management for Deactivation

Description

Units - Lot

Unit Cost - 1,822.5 hrs \$88,930 - Sub Costs \$4,184 - Supply Costs

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Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect
WBS Filter
Activity Filter

Baseline Devl

Starts In FY

Resources

1AAD

1AD16A0004

Unit Cost Adjustment factor - N/A

WBS No:

Activity ID:

onic cobe najabemene raccor N/n				
Cost Element	Skill	Department	Curve	Ouantity Units
750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	KA70S B371 Facility Disposition	Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Sally	1 full-time support			
750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	KA70S B371 Facility Disposition	Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Chavez	1 full-time support			
750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	KA70S B371 Facility Disposition	Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Wrapp	1 full-time support			
750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	KA70S B371 Facility Disposition	Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Maiestic	1 full-time support			
750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	KA70S B371 Facility Disposition	Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Floerke	1 full-time support			
750 STRAIGHT TIME BASE	P070 COST ESTIMATORS PLANNERS AN	KA70S B371 Facility Disposition	Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Annette	1 full-time support			
A52 TENERA	P070 COST ESTIMATORS PLANNERS AN	KA70S B371 Facility Disposition	Linear	132.288.00 Dollars
Factors 11024 \$/month	12 months			
A5C SUPPLIES	0000 NONE	KA70S B371 Facility Disposition	Linear	25.104.00 Dollars
Factors 2092 \$/month	12 months			

Line Item SYS - Contingency And Escalation

BOE

Resources

s	Cost Element		Skill		Department	Curve		Units
C	ON CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	35.612.46	Dollars
Fac	ors 35612.5 Dollars							
E	SC ESCALATION	0000	NONE	ZDEPT	No Department	Linear	73.108.82	Dollars

Factors 73108.8 Dollars

Activity ID: 1AD16A0005 Description: B371 Project Management (05)- Decommissioning

Cost Risk 1 Schedule Risk

Line Item	Description	2						Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
D&D PM FY05	D&D FY05 Project Management	1.00	each	EE	10.920	10.920	471.162	157.392	0	628.554	163.964	792.518
SYS	Contingency And Escalation	1.00 ea EE 0			0	0	0	423.940	423.940	0	423.940	
	Total for Activity 1AD16A0005:						471.162	157.392	423.940	1.052.494	163.964	1.216.458

Line Item D&D PM FY05 - D&D FY05 Project Management

BOE

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Experience Item Desc - Program Management consists of a Program Manager and three Leads for the major activities in Deactivation. The Program Manager should have a person to do administrative work as the scope of the operations would warrant such additional responsibilities. Each of the three major activities will have to have a lead to assure the work is accomplished and to manage the personnel issues of those assigned salaried, hourly, or contracted services. Each lead will need a technically qualified support engineer to work on issues and problems that will occur daily in the performance of tasks associated with the activity. Additionally, the technical engineers will have to work together on many unknowns that will surface during the deactivation tasks. Because of the newness of the tasks that are going to be done in deactivation, it is probable that some travel to other DOE or nuclear sites will be necessary to determine how efficiencies from similar work can be captured for B371 Deactivation work. As there is a great deal of planning involved, off site meeting to support large numbers or personnel or lengthy sessions will also occasionally be necessary. As this is a new process and many unknowns are expected, it is likely that outside contractors will be required to solve specific problems or that a new technology will arise to speed up the process, make it safer or simpler, or that a contractor will be used to perform a task within the activity.

Breakdown of Cost Data:

Item - Program Management for Deactivation

Units - Lot

Unit Cost - 1,822.5 hrs \$88,930 - Sub Costs \$4,184 - Supply Costs

Unit Cost Adjustment factor - N/A

Resources

25	Cost Element		Skill			Department	Curve	Ouantity	Units	
	750	STRAIGHT TIME BASE	G010 ADMINISTRATIVE	ASSISTANTS	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours	
	Factors	1820 Hours (Oct-Sen) Sally	1 full-tim	e support						

WBS No: 1AAD Activity ID: 1AD16A0005

Rocky Flats Closure Project Rasaline Cost and Rasis of Estimate

Proiect WBS Filter Baseline Devl 1AAD

		Baseline Cost an	a Basis	or Estimate	Activity Filter *		Starts In FY *
750 STRAIGHT TIME BASE	M020 MANAG	SERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition		Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Floerke	. 1	full-time support					
750 STRAIGHT TIME BASE	M020 MANAG	SERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition		Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Chavez	. 1	full-time support					
750 STRAIGHT TIME BASE	M020 MANAG	SERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition		Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Wrapp	. 1	full-time support					
750 STRAIGHT TIME BASE	M020 MANAG	SERS (GRADE 69 - 72)	KA70S	B371 Facility Disposition		Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Maiestic	1	full-time support					
750 STRAIGHT TIME BASE	P070 COST E	STIMATORS PLANNERS AN	KA70S	B371 Facility Disposition		Linear	1.820.00 Hours
Factors 1820 Hours (Oct-Sep) Annette	1	full-time support					
A52 TENERA	P070 COST E	STIMATORS PLANNERS AN	KA70S	B371 Facility Disposition		Linear	132.288.00 Dollars
Factors 11024 \$/month	12	months					
A5C SUPPLIES	0000 NONE		KA70S	B371 Facility Disposition		Linear	25.104.00 Dollars
Factors 2092 \$/month	12	months					

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element			Skill	Department	Curve	Quantity	Units
CON	CON CONTINGENCY 0000 NONE		ZDEPT No Department	Linear	301.166.80	Dollars	
Factors	301167 Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT No Department	Linear	122.773.30	Dollars

Factors 122773 Dollars

Activity ID: 1AD31DR010 Description: Label Active Piping Systems Cost Risk 2 Schedule Risk

3

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
ASD All Sets	Active System Designation	1.00	each	EE	3.332	3.332	84.075	6.546	0	90.621	40.104	130.725
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.991	6.991	0	6.991
	Tot	Total for Activity 1AD31D				3.332	84.075	6.546	6.991	97.612	40.104	137.715

Line Item ASD All Sets - Active System Designation

BOE

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Experience Item Desc - A walkdown will be conducted in each room to identify active piping and systems in the room. This activity includes all necessary preliminary evaluations, walkdown of drawings, and document preparation required to perform the labeling of active piping and systems in each room. This activity also includes the actual labeling of piping and systems along the perimeter of each room at wall inlets and outlets.

Breakdown of Cost Data:

Item - Designate and label active piping and systems

Units - Total Project

Unit Cost - 5373 hrs \$6,137 - Subcontractor Costs \$1,279 - Supply Cost

Unit Cost Adjustment factor - N/A

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

s	C	ost Element			Skill			Department	Curve	Ouantity	Units
750	STRAIGH1	TTIME BASE	C070	PAINTER	RS	KA20H	371/374	Facility Mamt Steelworkers	Linear	185.37	Hours
Factors	105	rooms		2	hrs/20 labels/room		0.971	January 2000 Earned Value Factor			
									0.90907 CA AAD Adii	ustment Factor	
750	STRAIGH1	TTIME BASE	C120	D&D SKI	LLED TRADES	KA70H	371 Faci	lity Disposition Steelworkers	Linear	1.807.78	Hours
Factors	8	hrs/day to attach labels to a	ctive	128	days		2	Process Specialists	0.971 January 2000	Earned Value	Factor
									0.90907 CA AAD Adiu	ustment Factor	
750	STRAIGH1	TTIME BASE	E080	NUCLEA	R (CRITICALITY) ENGINEER	SA01S	SSOC 3	71 Closure Proiect	Linear	70.62	Hours
Factors	80	hours for IWCP (Crit Eng)		0.971	January 2000 Earned Value	Factor					
									0.90907 CA AAD Adii	ustment Factor	

WBS No: 1AAD Activity ID: 1AD31DR010

750

STRAIGHT TIME BASE

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Baseline Devl 1AAD

	Activity	Filter "	Starts In FY
SA01S	SSOC 371 Closure Project	Linear	70.62 Hours
Factor		•	•

Factors hrs/room to assist with IWCP (Safety 0.971 January 2000 Earned Value Factor

E120 SAFETY ENGINEERS

								0.90907 CA AAD AG	iusimeni Facioi
750	STRAIGHT	TIME BASE	E130	OTHER E	NGINEERS	SA01S	SSOC 371 Closure Project	Linear	865.82 Hours
Factors	0.5	Efficiency Reduction (FCP	2000-	2	FTEs for drawing walkdown	, IWCP	128 days to complete the walk-dow	n of all 0.95788 conversion	to overtime
	8	hrs/dav		0.971	January 2000 Earned Value	Factor		0.90907 CA AAD Ad	iustment Factor
750	STRAIGHT	TIME BASE	P090	INDUSTR	IAL HYGIENISTS	SA01S	SSOC 371 Closure Project	Linear	70.62 Hours
_									

750	STRAIGHT	TIME BASE	P090	IINDUSTR	MAL HYGIENISTS	SA01S	SSOC 3	/1 Closure Project	Lir	near	70.62IHours
Factors	80	hrs to assist with IWCP pre	paration	0.971	January 2000 Earned Value	Factor					
									0.90907	CA AAD Adii	stment Factor
750	STRAIGHT	TIME BASE	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA10H	371 Com	nolex Steelworkers	Lir	near	261.33 Hours
Factors	0.64247	Efficiency Reduction (FCP	2000-	0.45	conversion to overtime		8	hours/day to support Process	128	days to label	all the active piping and
	0.971	January 2000 Earned Value	e Factor						0.90907	CA AAD Adii	stment Factor
A57	LATA		P070	COST ES	TIMATORS PLANNERS AN	KA20S	B371/374	4 Facility Management	Lir	near	5.417.15 Dollars
Factors	80	hrs to develop and complet	e an	1.02283	3 FY00 Escalation		75	\$/hour	0.971	January 2000	Earned Value Factor
									0.90907	CA AAD Adiu	stment Factor
A5C	SUPPLIES		0000	NONE		SA01S	SSOC 3	71 Closure Proiect	Lir	near	1.128.89 Dollars
Factors	105	rooms		12	\$/half sheet for 20 labels		1.015	FY00 Escalation	0.971	January 2000	Earned Value Factor
									0.90907	CA AAD Adiu	stment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element	Skill			Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	4.242.01	Dollars
Fc	actors	4242.01 Dollars					·		
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.748.85	Dollars

2748.85 Dollars Factors

Demo P&E

Activity ID: 1AD3	71B010	Description: E	3371/374 Decommissioning	Demolition	P&E
Line Item		Descriptio	on	Quantity	Ur

Cost Risk 4 Schedule Risk 4											
or Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost						
Total	Cost	& Escalation	Cost								
103.983	495.503	0	599.487	36.186	635.673						
0	0	507.409	507.409	0	507.409						

Line Item DemoB10 - Demo P&E

BOE

DemoB10 SYS

> Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Labor

Hours/Unit

3.515

Labor Hours

Total

3.515

3.515

Labo

103.983

Item Desc - Decommissioning Planning & Engineering

Breakdown of Historical Data:

Contingency And Escalation

Item - Planning & Engineering

Units - 1 lot

Unit Cost - 59 hours, \$8,424 subcontracts, \$486 supplies

Unit Cost Adjustment factor - 1.723

Revised Unit Cost - 102 hours, \$14,515 subcontracts, \$837 supplies

Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

1.00 each

Total for Activity 1AD371B010:

1.00 ea

Units

BOE

Type

HC

FF

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources Cost Element Department Curve Units

Rocky Flats Closure Project Activity ID: 1AD371B010 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY 750 STRAIGHT TIME BASE E130 OTHER ENGINEERS R100S RMRS Salaried 2.549.03 Hours Linear Factors 2804 Hours 0.90907 CA AAD Adjustment Factor 750 STRAIGHT TIME BASE G010 ADMINISTRATIVE ASSISTANTS R100S RMRS Salaried 899.98 Hours Linear 990 Hours Factors 0.90907 CA AAD Adjustment Factor STRAIGHT TIME BASE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 66.36 Hours 750 Linear Factors 73 Hours 0.90907 CA AAD Adjustment Factor A5C SUPPLIES 0000 NONE KA70S B371 Facility Disposition Linear 27.019.34 Dollars 29722 Dollars **Factors** 0.90907 CA AAD Adjustment Factor KA70S B371 Facility Disposition A5H SUBCONTRACTED SRVS 0000 NONE Linear 385.048.80 Dollars Factors 423564 Dollars 0.90907 CA AAD Adjustment Factor 8.634.34 Dollars E050 ENVIRONMENTAL ENGINEERS KA70S B371 Facility Disposition A5H SUBCONTRACTED SRVS Linear Factors 9498 Dollars 0.90907 CA AAD Adjustment Factor SUBCONTRACTED SRVS E130 OTHER ENGINEERS KA70S B371 Facility Disposition 69.681.03 Dollars A5H Linear Factors 76651 Dollars 0.90907 CA AAD Adjustment Factor G010 ADMINISTRATIVE ASSISTANTS KA70S B371 Facility Disposition 5.119.88 Dollars A5H SUBCONTRACTED SRVS Linear 5632 Dollars Factors 0.90907 CA AAD Adjustment Factor Line Item SYS - Contingency And Escalation Resources Cost Element Skill Department Curve **Ouantity** Units CON CONTINGENCY 0000 NONE ZDEPT No Department 369.801.20 Dollars Linear Factors 369801 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 137.607.70 Dollars Linear Factors 137608 Dollars Activity ID: 1AD371B030 Description: B371/374 Decommissioning Demolition Site Support Cost Risk 2 Schedule Risk Line Item Description Quantity Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Hours/Unit Type Total Total Cost & Escalation Cost DemoB30 Demo Site Support 1.00 each HC 13.725 13.725 299.226 2.398.778 2.698.004 104.131 2.802.134 Contingency And Escalation FF 1.00 ea Λ 0 2.404.048 2.404.048 2.404.048 Total for Activity 1AD371B030: 13.725 299.226 2.398.778 2.404.048 104.131 5.102.052 5.206.182 Line Item DemoB30 - Demo Site Support Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate. Item Desc - Decommissioning Planning & Engineering Breakdown of Historical Data: Item - Planning & Engineering Units - 1 lot Unit Cost - 59 hours, \$8,424 subcontracts, \$486 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 102 hours, \$14,515 subcontracts, \$837 supplies Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

WBS No:

BOE

SYS

BOE

1AAD

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Baseline Devl

Proiect

WBS No: 1AAD Activity ID: 1AD371B030

Directive to accept additional risk.

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Baseline Devl 1AAD

Activity Filter Starts In FY Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management

0.90907 CA AAD Adjustment Factor

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element	Skill		Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E130 OTHER ENGINEERS	R100S	RMRS Salaried	Linear	3.290.83	Hours
F	actors	3620 Hours						
				,		0.90907 CA AAD Adi	ustment Factor	
	750	STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	8.847.06	Hours
F	actors	9732 Hours						
						0.90907 CA AAD Adi	ustment Factor	
	750	STRAIGHT TIME BASE	P150 TRAINERS	R100S	RMRS Salaried	Linear	1.587.23	Hours
F	actors	1746 Hours						
				1		0.90907 CA AAD Adi	ustment Factor	
	A5C	SUPPLIES	0000 NONE	KA70S	B371 Facility Disposition	Linear	117.164.40	Dollars
F	actors	128884 Dollars						
_						0.90907 CA AAD Adi	ustment Factor	
	A5H	SUBCONTRACTED SRVS	0000 NONE	KA70S	B371 Facility Disposition	Linear	2.230.738.00	Dollars
F	actors	2453871 Dollars						
_						0.90907 CA AAD Adi	ustment Factor	
	A5H	SUBCONTRACTED SRVS	E110 QUALITY CONTROL ENGINEERS	KA70S	B371 Facility Disposition	Linear	14.526.01	Dollars
F	actors	15979 Dollars						
_						0.90907 CA AAD Adi	ustment Factor	
	A5H	SUBCONTRACTED SRVS	E120 SAFETY ENGINEERS	KA70S	B371 Facility Disposition	Linear	14.540.56	Dollars
F	actors	15995 Dollars						
_					1	0.90907 CA AAD Adi	ustment Factor	
	A5H	SUBCONTRACTED SRVS	E130 OTHER ENGINEERS	KA70S	B371 Facility Disposition	Linear	21.809.47	Dollars
F	actors	23991 Dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	CON		0000	NONE	ZDEPT	No Department	Linear	1.779.032.00	
r	Factors	1779032 Dollars			I				
Į	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	625.016.40	Dollars
	Factors	625016 Dollars							

Activity ID: 1AD371L030 Description: B371/374 Decommissioning Demolition Final Survey

Activity ID: 1A	D371L030 Description: B371/374 Decommissioning	Demolition	Final Surve	У				Cost Risk	2 Schedule R	risk 3		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
DemoL030	Demo Final Survey	1.00	each	HC	7.713	7.713	179.497	665.438	0	844.935	62.465	907.399
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	778.490	778.490	0	778.490
	То	Total for Activity 1AD371L0				7.713	179.497	665.438	778.490	1.623.424	62.465	1.685.889

Line Item DemoL030 - Demo Final Survey

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Characterization Breakdown of Historical Data: Item - Characterization Units - 1 lot Unit Cost - 9,831 hours, \$663,429 subcontracts, \$55,908 supplies Unit Cost Adjustment factor - 1.723 Revised Unit Cost - 16,939 hrs, \$1,143,088 subcontracts, \$96,329 supplies

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Proiect **Rocky Flats Closure Project** WBS Filter **Baseline Cost and Basis of Estimate**

1AD371L030 1AAD Activity Filter

Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to

September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

WBS No:

Activity ID:

1AAD

S	Cost Element		Skill		Department	Curve	Ouantity Units
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	R100S	RMRS Salaried	Linear	1.445.87 Hours
Factors	1590.5 Hours						
						0.90907 CA AAD Adiu	stment Factor
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	6.266.67 Hours
Factors	6893.5 Hours						
						0.90907 CA AAD Adiu	stment Factor
A5C	SUPPLIES	0000	NONE	KA70S	B371 Facility Disposition	Linear	43.784.84 Dollars
Factors	48164.5 Dollars						
						0.90907 CA AAD Adiu	stment Factor
A5H	SUBCONTRACTED SRVS	0000	NONE	KA70S	B371 Facility Disposition	Linear	621.653.10 Dollars

Factors 683835 Dollars

0.90907 CA AAD Adjustment Factor

Starts In FY

Baseline Devl

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	576,093.90	Dollars
	Factors	576094 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	202,395.60	Dollars
	Factors	202396 Dollars							

Activity ID: 1AD	Description: B371/374 Decommissioning	Demolition	/Disposal					Cost Risk	4 Schedule R	isk 4		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
1AQ371H650	Demolition & Disposal	1.00	ea	HC	0	0	0	48.472	0	48.472	0	48.472
1AQ371I650	Demolition & Disposal	1.00	ea	HC	0	0	0	48.472	0	48.472	0	48.472
1AQ371J650	Demolition & Disposal	1.00	ea	HC	0	0	0	96.943	0	96.943	0	96.943
1AQ371K650	Demolition & Disposal	1.00	ea	HC	0	0	0	96.943	0	96.943	0	96.943
1AQ373X650	Demolition and Disposal	1.00	ea	HC	0	0	0	24.999	0	24.999	0	24.999
1AQ374A650a	Demolition and Disposal (Modular Facility)	1.00	ea	HC	0	0	0	13.838	0	13.838	0	13.838
1AQ374A650b	Foundation/Slab Removal	1.00	ea	HC	0	0	0	18.645	0	18.645	0	18.645
1AQ376A650	Demolition & Disposal	1.00	ea	HC	0	0	0	132.124	0	132.124	0	132.124
1AQ376X650a	Demolition and Disposal (Modular Facility)	1.00	ea	HC	0	0	0	43.333	0	43.333	0	43.333
1AQ376X650b	Foundation/Slab Removal	1.00	ea	HC	0	0	0	66.589	0	66.589	0	66.589
1AQ377X650a	Decommissioning Demolition & Disposal	1.00	ea	HC	0	0	0	2.798	0	2.798	0	2.798
1AQ377X650b	Foundation/Slab Removal	1.00	ea	HC	0	0	0	2.797	0	2.797	0	2.797
1AQ378X650a	Demolition & Disposal	1.00	ea	HC	0	0	0	6.031	0	6.031	0	6.031
1AQ378X650b	Foundation/Slab Removal	1.00	ea	HC	0	0	0	2.945	0	2.945	0	2.945
1AQ381X650a	Demolition and Disposal (Reinforced Concrete)	1.00	ea	HC	0	0	0	58.571	0	58.571	0	58.571
1AQ381X650b	Foundation/Slab Removal	1.00	ea	HC	0	0	0	29.299	0	29.299	0	29.299
1AQ384X650	Demolition and Disposal	1.00	ea	HC	0	0	0	7,500	0	7,500	0	7,500
1AQ716FDEM	Demolition & Disposal	1.00	ea	HC	0	0	0	8,425,493	0	8,425,493	0	8,425,493
1AQ746FDEM	Demolition & Disposal	1.00	ea	HC	0	0	0	1,017,022	0	1,017,022	0	1,017,022

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Activity ID: 1AD371M000

Rocky Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
1AAD
Activity Filter
*

| SYS | | Contingency And Escalation | 1.00 | ea | EE | 0 | 0 | 0 | 8.149.068 | 8.149.068 | 8.149.068 | 0 | 8.149.068 | 8.149.068 | 0 | 8.149.068 | 8.149.068 | 0 | 8.149.068 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 | 18.291.882 | 0 |

Line Item 1AQ371H650 - Demolition & Disposal

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal
Breakdown of Historical Data:

Item - Demolition & Disposal
Units - 1 lot
Unit Cost - \$30,946 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$53,320 subcontracts
Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%

2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
 3) An increase in cost to account for the completion date acceleration from March 2006 to

3) An increase in cost to account for the completion date acceleration from march 2006 September 2005 -- +18.25%
4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

rces	Cost Element		Cost Element Skill			Department	Curve	Ouantity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	48.471.55	Dollars

Factors 53320 Dollars

Line Item 1AQ371I650 - Demolition & Disposal

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal
Breakdown of Historical Data:
Item - Demolition & Disposal
Units - 1 lot
Unit Cost - \$30,946 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$53,320 subcontracts
Basis for adjustment - See Below:
1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to

September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces		Cost Element		Skill	Department	Curve	Ouantity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S B371 Facility Disposition	Linear	48.471.55	Dollars

Factors 53320 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQ371J650 - Demolition & Disposal

BOE Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of

WBS No: 1AAD Activity ID: 1AD371M000

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Filter * Starts In FY *

gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal
Breakdown of Historical Data:
Item - Demolition & Disposal
Units - 1 lot
Unit Cost - \$61,892 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$106,640 subcontracts
Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces	Cost Element Skill			Department	Curve	Quantity	Units		
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	96.943.10	Dollars

Factors 106640 dollars

Line Item 1AQ371K650 - Demolition & Disposal

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal
Breakdown of Historical Data:
Item - Demolition & Disposal
Units - 1 lot
Unit Cost - \$61,892 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$106,640 subcontracts
Basis for adjustment - See Below:
1) An increase in cost to reflect the unplanned cost increases in the final stages of

- the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management
Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element	Skill	Department	Curve	<i>Ouantity</i>	Units
A5B	CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	96.943.10	Dollars

Factors 106640 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQ373X650 - Demolition and Disposal

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal

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WBS No: 1AAD
Activity ID: 1AD371M000

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD Activity Filter *

Starts In FY *

Breakdown of Historical Data:
 Item - Demolition & Disposal
 Units - 1 lot
 Unit Cost - \$15,961 subcontracts
 Unit Cost Adjustment factor - 1.723
 Revised Unit Cost - \$27,500 subcontracts
 Basis for adjustment - See Below:
 1) An increase in cost to reflect the unplanned cost increases in the final stages of
 the B779 project -- +34.3%
 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
 3) An increase in cost to account for the completion date acceleration from March 2006 to
 September 2005 -- +18.25%
 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management
Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	S Cost Element		Skill		Department		Curve	Quantity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	24.999.39	Dollars

Factors 27500 Dollars

Line Item 1AQ374A650a - Demolition and Disposal (Modular Facility)

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal (Modular Facility)
Breakdown of Historical Data:

Item - Demolition & Disposal
Units - 1 lot
Units - 1 lot
Unit Cost - \$8,835 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$15,222 subcontracts
Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element			Skill		Department	Curve	Quantity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	13.838.14	Dollars

Factors 15222.3 Dollars

Line Item 1AQ374A650b - Foundation/Slab Removal

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Removal of Foundation and Slab Breakdown of Historical Data: Item - Removal of Foundation and Slab Units - 1 lot Unit Cost - \$11,904 subcontracts

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Rocky Flats Closure Project **Baseline Cost and Basis of Estimate**

Proiect Baseline Devl WBS Filter 1AAD Activity Filter

Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$20,510 subcontracts Basis for adjustment - See Below:

- 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units	
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	18.645.00	Dollars	

20510 Dollars Factors

Line Item 1AQ376A650 - Demolition & Disposal

0.90907 CA AAD Adjustment Factor

Starts In FY *

BOE

WBS No:

Activity ID:

1AAD

1AD371M000

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal Breakdown of Historical Data: Item - Demolition & Disposal Units - 1 lot Unit Cost - \$84,353 subcontracts Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$145,340 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces	Cost Element	Skill	Department	Curve	Quantity	Units
	A5B CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	132.124.10	Oollars

Factors 145340 Dollars

Line Item 1AQ376X650a - Demolition and Disposal (Modular Facility)

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal (Modular Facility) Breakdown of Historical Data: Item - Demolition & Disposal Units - 1 lot Unit Cost - \$27,666 subcontracts Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$47,668 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of

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WBS No: 1AAD
Activity ID: 1AD371M000

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1AAD

Activity Filter * Starts In FY *

the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element Skill		Department	Curve	Quantity	Units
A5	CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	43.333.04	Dollars

Factors 47667.5 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQ376X650b - Foundation/Slab Removal

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Removal of Foundation and Slab
Breakdown of Historical Data:

Item - Removal of Foundation and Slab
Units - 1 lot
Unit Cost - \$42,513 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$73,250 subcontracts
Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element		Skill	Department	Curve	Quantity	Units
	A5B	CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	66.589.29	Dollars

Factors 73250 Dollars

0.90907 CA AAD Adjustment Factor

Line Item 1AQ377X650a - Decommissioning Demolition & Disposal

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal (Masonry Facility)
Breakdown of Historical Data:

Item - Demolition & Disposal
Units - 1 lot
Unit Cost - \$1,786 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$3,078 subcontracts
Basis for adjustment - See Below:

1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

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4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management
Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	2.797.71	Dollars

Factors 3077.56 Dollars

Line Item 1AQ377X650b - Foundation/Slab Removal

0.90907 CA AAD Adjustment Factor

Starts In FY *

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Removal of Foundation and Slab
Breakdown of Historical Data:

Item - Removal of Foundation and Slab
Units - 1 lot
Unit Cost - \$1,786 subcontracts
Unit Cost Adjustment factor - 1.723
Revised Unit Cost - \$3,077 subcontracts
Basis for adjustment - See Below:
1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%
2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

ces		Cost Element		Skill		Department	Curve	Ouc	antity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	2	2.796.75	Dollars

Factors 3076.5 Dollars

Line Item 1AQ378X650a - Demolition & Disposal

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Breakdown of Historical Data:
 Item - Demolition & Disposal
 Units - 1 lot
 Unit Cost - \$3,850 subcontracts
 Unit Cost Adjustment factor - 1.723
 Revised Unit Cost - \$6,634 subcontracts
 Basis for adjustment - See Below:
 1) An increase in cost to reflect the unplanned cost increases in the final stages of
 the B779 project -- +34.3%
 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
 3) An increase in cost to account for the completion date acceleration from March 2006 to
 September 2005 -- +18.25%
 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Item Desc - Decommissioning Demolition & Disposal (Masonry Facility)

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

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WBS No: 1AAD Activity ID: 1AD371M000

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter

Baseline Devl 1AAD

Starts In FY

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

BOE

Cost Element		Skill		Department		Curve	<i>Ouantity</i>	Units
A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	3.015.38	Dollars

3317 Dollars Factors

0.90907 CA AAD Adjustment Factor 0000 NONE KA70S B371 Facility Disposition CONSTRUCTION 3 015 38 Dollars

3317 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item 1AQ378X650b - Foundation/Slab Removal

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Removal of Foundation and Slab Breakdown of Historical Data: Item - Removal of Foundation and Slab Units - 1 lot Unit Cost - \$1,880 subcontracts Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$3,240 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3%

- 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7%
- 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25%
- 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces	Cost Element		Skill		Department	Curve	Quantity	Units	
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	2,945.38	Dollars

3240 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item 1AQ381X650a - Demolition and Disposal (Reinforced Concrete)

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Breakdown of Historical Data: Item - Demolition & Disposal Units - 1 lot Unit Cost - \$37,394 subcontracts Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$64,430 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Item Desc - Decommissioning Demolition & Disposal (Reinforced Concrete Facility)

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

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WBS No: 1AAD Activity ID: 1AD371M000

Rocky Flats Closure Project Baseline Cost and Basis of Estimate Proiect Baseline Devl WBS Filter

1AAD Activity Filter

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

rces	Cost Element	Skill	Department	Curve	Ouantity	Units
	A5B CONSTRUCTION	0000 NONE	KA70S B371 Facility Disposition	Linear	58.571.31	Dollars

64430 Dollars Factors Line Item 1AQ381X650b - Foundation/Slab Removal

0.90907 CA AAD Adjustment Factor

Starts In FY

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Removal of Foundation and Slab Breakdown of Historical Data: Item - Removal of Foundation and Slab Units - 1 lot Unit Cost - \$18,706 subcontracts Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$32,230 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resource

ces		Cost Element		Skill		Department	Curve	Quantity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	29.299.29	Dollars

32230 Dollars Factors

Line Item 1AQ384X650 - Demolition and Disposal

0.90907 CA AAD Adjustment Factor

BOE

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal Breakdown of Historical Data: Item - Demolition & Disposal Units - 1 lot Unit Cost - \$4,788 subcontracts Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$8,250 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Units Resources Cost Element Department Curve

WBS No: 1AAD Proiect Baseline Devl Rocky Flats Closure Project Activity ID: 1AD371M000 WBS Filter 1AAD **Baseline Cost and Basis of Estimate** Activity Filter

A5B CONSTRUCTION 0000 NONE KA70S B371 Facility Disposition 7.499.82 Dollars Linear

Factors 8250 Dollars

Line Item 1AQ716FDEM - Demolition & Disposal

0.90907 CA AAD Adjustment Factor

Starts In FY

Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal (Reinforced Concrete Facility) Breakdown of Historical Data: Item - Demolition & Disposal Units - 1 lot Unit Cost - \$12,771,986 subcontracts 1st Unit Cost Adjustment factor - .96 Revised Unit Cost - \$12,261,110 subcontracts Basis for adjustment - Estimated reduction associated with the elimination of PA at end of FY02 will reduce delays associated with security requirements. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$21,125,894 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to

4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

es	Cost Element			Skill		Department	Curve	Quantity	Units
	A5B	CONSTRUCTION	0000	NONE	KA70S	B371 Facility Disposition	Linear	8.425.493.00	Dollars

9268267 Dollars Factors

0.90907 CA AAD Adjustment Factor

BOE

Line Item 1AQ746FDEM - Demolition & Disposal Historical Data Source - The costs for Decommissioning B123, the 690 trailer complex, 4 tents in the 904/906 cluster, tanks 221 and 224, and the removal of gloveboxes and piping and ductwork in B779 are the primary Historical Data used in establishing the unit costs in this estimate. A complete breakdown of the historical costs and the adjustments made to the actual costs are in the Facility Disposition Cost Model (FDCM) Rev. 2 Dated May 1999.

Item Desc - Decommissioning Demolition & Disposal Breakdown of Historical Data: Item - Demolition & Disposal Units - 1 lot Unit Cost - \$676,358 demolition subcontract 1st Unit Cost Adjustment factor - .96 Revised Unit Cost - \$649,304 demolition subcontract Basis for adjustment - Estimated reduction associated with the elimination of PA at end of FY02 will reduce delays associated with security requirements. 2nd Unit Cost Adjustment factor - 1.723 Revised Unit Cost - \$1,118,751 subcontracts Basis for adjustment - See Below: 1) An increase in cost to reflect the unplanned cost increases in the final stages of the B779 project -- +34.3% 2) An increase in cost to reflect the specific scope of Building 371/374 -- +28.7% 3) An increase in cost to account for the completion date acceleration from March 2006 to September 2005 -- +18.25% 4) A decrease in cost to transfer scope from decommissioning to deactivation -- -8.95%

Note: The above numbers were original estimates prior to June target reductions. June adjustments to the Basis of Estimates were based upon Management Directive to accept additional risk.

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WBS No: 1AAD **Rocky Flats Closure Project** Activity ID: 1AD371M000 **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect 1AAD WBS Filter Activity Filter

Starts In FY

This estimate includes a project productivity/efficiency factor for committed but as yet undef.	defined cost reductions.
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Resources

es	Cost Element		Skill	Department	Curve	Ouantity	Units
	A5B CONSTRUCTION	0000	NONE KA70	B371 Facility Disposition	Linear	1.017.022.00	Dollars

1118751 Dollars Factors

0.90907 CA AAD Adjustment Factor

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	5.908.786.00	Dollars
	Factors	5908786 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.240.282.00	Dollars

Factors 2240282 Dollars

Activity ID: 1AQ710APEN Description: B371 Decom Plng & Engr. FY00

Cost Risk 1 Schedule Risk

TOUTHER ID. ITE	Description. Bot i Booom i inq a Enq.: 1		Cost Risk Schedule Risk									
Line Item	Description	Quantity Units BOE					Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
FY00 P&E	B371 Decom P&E FY00	1.00	each	HC	81	81	2.236	106.392	0	108.628	1.088	109.715
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	756	756	0	756
	Tot	81	2.236	106.392	756	109.384	1.088	110.472				

Line Item FY00 P&E - B371 Decom P&E FY00

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Planning Breakdown of Historical Data: Item - Planning Units - 1 lot Unit Cost - 914.93 hours, \$367,430 subcontracts, \$5,000 supplies

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A Basis for adjustment - N/A

Resources

es	Ca	ost Element		Skill		Department	Curve	Quantity	Units
Į	750 STRAIGHT	TIME BASE M010	FOREMEN	N / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.98	Hours
,	Factors 231.379	hours	0.35	EAC Adjustment					
Į	A5C SUPPLIES	0000	NONE		KA70S	B371 Facility Disposition	Linear	1.360.40	Dollars
	Factors 3886.85	dollars	0.35	EAC Adjustment	,				
Į	A5H SUBCONT	RACTED SRVS E050	ENVIRON	MENTAL ENGINEERS	KA70S	B371 Facility Disposition	Linear	10.869.31	Dollars
	Factors 31055.2	dollars	0.35	EAC Adjustment	,				
Į	A5H SUBCONT	RACTED SRVS E130	OTHER E	NGINEERS	KA70S	B371 Facility Disposition	Linear	10.869.31	Dollars
r	Factors 31055.2	dollars	0.35	EAC Adjustment	ı			1	
Į	A5H SUBCONT	RACTED SRVS E130	OTHER E	NGINEERS	KA70S	B371 Facility Disposition	Linear	1,360.36	Dollars
	Factors 3886.75	dollars	0.35	EAC Adjustment	T				
Į	A5H SUBCONT	RACTED SRVS E130	OTHER E	NGINEERS	KA70S	B371 Facility Disposition	Linear	37,954.14	Dollars
	<i>Factors</i> 108440	dollars	0.35	EAC Adjustment	T				
Į	A5H SUBCONT	RACTED SRVS E130	OTHER E	NGINEERS	KA70S	B371 Facility Disposition	Linear	15,845.52	Dollars
	Factors 45272.9	dollars	0.35	EAC Adjustment	T				
Į	A5H SUBCONT	RACTED SRVS E130	OTHER E	NGINEERS	KA70S	B371 Facility Disposition	Linear	5,063.55	Dollars
	Factors 14467.3	dollars	0.35	EAC Adjustment	T				
Į	A5H SUBCONT	RACTED SRVS E130	OTHER E	NGINEERS	KA70S	B371 Facility Disposition	Linear	16,623.64	Dollars
ı	Factors 47496.1	Prime dollars	0.35	EAC Adjustment				Т	1
Į	A5H SUBCONT	RACTED SRVS G010	O ADMINIST	TRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	6.445.40	Dollars
	Factors 18415.4	dollars	0.35	EAC Adjustment					

WBS No: 1AAD Activity ID: 1AQ710APEN

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Baseline Devl Proiect WBS Filter 1AAD Activity Filter

Starts In FY

Line Item SYS - Contingency And Escalation

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Resources	Cost Element		Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000	NONE	ZDEPT No Department	Linear	440.82	Dollars
<u>.F</u>	Factors 440.824 Dollars						
	ESC ESCALATION	0000	NONE	ZDEPT No Department	Linear	315.64	Dollars
					- Into Car		-

Factors 315.643 Dollars

Activity ID: 1AQ	Description: B3/1 Decommissioning Cha	Cost Risk 2 Schedule Risk 3										
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
FY00 Charac	B371 Decom Characterization	1.00	each	HC	1.500	1.500	31.130	96.740	0	127.870	15.145	143.014
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	993	993	0	993
Total for Activity 1AQ710BCHR:							31.130	96.740	993	128.863	15.145	144.008

Line Item FY00 Charac - B371 Decom Characterization

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Characterization Breakdown of Historical Data: Item - Characterization Units - 1 lot Unit Cost - 4,700 Hrs, \$296,305 subcontracts Unit Cost Adjustment factor - N/A Revised Unit Cost - N/A Basis for adjustment - N/A

Resources

es		Cost Element	Skill				Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	T050	RADIATIO	ON CONTROL TECHNOLIGI	KA10H	371 Complex Steelworkers	Linear	1.500.24	Hours
	Factors	3572 hours		0.42	EAC Adjustment					
	A5H	SUBCONTRACTED SRVS	0000	NONE		KA70S	B371 Facility Disposition	Linear	96.739.82	Dollars
	Factors	230333 dollars		0.42	EAC Adjustment					

Line Item SYS - Contingency And Escalation

BOE

es		

ces	Cost Element		Skill			Department	Curve	Quantity	Units
	CON CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	582.56	Dollars
	Factors	582.562 Dollars							
	FSC	ESCALATION	0000	NONE	ZDEDT	No Department	Linear	410.67	Dollare

Factors 410.671 Dollars

Activity ID: 1AQ	Activity ID: 1AQ710GPMG Description: B371 Decom. Proj. Mgmt. FY00 Cost Risk 1 Schedule Risk 1											
Line Item	Description	Quantity Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
FY00 Proj Mamt	B371 Decom. Proj Mgmt FY00	1.00 each	HC	422	422	11,652	7,171	0	18,824	5,686	24,510	
	422	11.652	7.171	0	18.824	5.686	24.510					

Line Item FY00 Proj Mgmt - B371 Decom. Proj Mgmt FY00

BOE

Historical Data Source - The costs for Decommissioning B123, actual data gathered during FY99 supporting the advanced planning and characterization for "Group A" Type 1 and 2 facilities, the characterization requirements defined within the "D&D Characterization Protocol" and the historical cost adjustments made to actual costs in the Facility Disposition Cost Model (FDCM) support the estimate.

Item Desc - Decommissioning Project Management Breakdown of Historical Data: Item - Project Management Units - 1 lot

Unit Cost - 1586.6 Hours, \$24,960 subcontracts, \$5,000 travel, \$2,000 supplies Unit Cost Adjustment factor - N/A

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WBS No: 1AAD Activity ID: 1AQ710GPMG

Rocky Flats Closure Project Baseline Cost and Basis of Estimate

Proiect WBS Filter Activity Filter Baseline Devl 1AAD

Starts In FY

Revised Unit Cost - N/A Basis for adjustment - N/A

Resources

s		Cost Element			Skill		Department	Curve	Ouantity	Units
Į	750 STRAIG	SHT TIME BASE	M010	FOREMEN	I / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	422.04	Hours
_	Factors 1205	.82 hours		0.35	EAC Adjustment					
Į	A5C SUPPL	ES (0000	NONE		KA70S	B371 Facility Disposition	Linear	532.00	Dollars
_	Factors 1520	dollars		0.35	EAC Adjustment					
	A5H SUBCO	NTRACTED SRVS	F130	OTHER EN	IGINEERS	KA70S	B371 Facility Disposition	Linear	6 639 36	Dollars

Factors 18969.6 dollars 0.35 **EAC Adjustment**

Activity ID: 1AXXXD16A5 Description: B371 Project Management (06)- Decommissioning

1 Schedule Risk Cost Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
D&D PM FY05	D&D FY05 Project Management	1.04	each	EE	10.920	11.305	487.766	162.939	0	650.705	185.057	835.762
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	650.101	650.101	0	650.101
	Tot	Total for Activity 1AXXXD16A5:						162.939	650.101	1.300.806	185.057	1.485.863

Line Item D&D PM FY05 - D&D FY05 Project Management

BOE

Estimator Experience - A complete breakdown of costs are in the B371 Deactivation Model located in the WAD Manager's Office.

Experience Item Desc - Program Management consists of a Program Manager and three Leads for the major activities in Deactivation. The Program Manager should have a person to do administrative work as the scope of the operations would warrant such additional responsibilities. Each of the three major activities will have to have a lead to assure the work is accomplished and to manage the personnel issues of those assigned salaried, hourly, or contracted services. Each lead will need a technically qualified support engineer to work on issues and problems that will occur daily in the performance of tasks associated with the activity. Additionally, the technical engineers will have to work together on many unknowns that will surface during the deactivation tasks. Because of the newness of the tasks that are going to be done in deactivation, it is probable that some travel to other DOE or nuclear sites will be necessary to determine how efficiencies from similar work can be captured for B371 Deactivation work. As there is a great deal of planning involved, off site meeting to support large numbers or personnel or lengthy sessions will also occasionally be necessary. As this is a new process and many unknowns are expected, it is likely that outside contractors will be required to solve specific problems or that a new technology will arise to speed up the process, make it safer or simpler, or that a contractor will be used to perform a task within the activity.

Breakdown of Cost Data:

Item - Program Management for Deactivation

Units - Lot

Unit Cost - 1,822.5 hrs \$88,930 - Sub Costs \$4,184 - Supply Costs

Unit Cost Adjustment factor - N/A

Resources

s	Cost Element			Skill		Department	Curve	Ouantity	Units
750	STRAIGHT TIME BASE	G010	ADMINIS ⁻	TRATIVE ASSISTANTS	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours
Factor	s 1820 Hours (Oct-Sep) Sally		1	full-time support	,				
750	STRAIGHT TIME BASE	M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours
Factor	s 1820 Hours (Oct-Sep) Wrapp		1	full-time support	I				
750	STRAIGHT TIME BASE	M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours
Factor	s 1820 Hours (Oct-Sep) Chavez		_1	full-time support		T		1	
750	STRAIGHT TIME BASE	M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours
Factor	1820 Hours (Oct-Sep) Maiestic		1	full-time support		T		1	
750	10 11 11 11 11 11 11 11 11 11 11 11 11 1	M020	MANAGE	RS (GRADE 69 - 72)	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours
Factor	s 1820 Hours (Oct-Sep) Floerke			full-time support					
750	STRAIGHT TIME BASE	P070	COST ES	TIMATORS PLANNERS AN	KA70S	B371 Facility Disposition	Linear	1.820.00	Hours
Factor			_1	full-time support		1			
A52		P070	COST ES	TIMATORS PLANNERS AN	KA70S	B371 Facility Disposition	Linear	132.288.00	Dollars
Factor			12	months					
A5C		0000	NONE		KA70S	B371 Facility Disposition	Linear	25.104.00	Dollars
Factor	s 2092 \$/month		12	months					

Line Item SYS - Contingency And Escalation

BOE

DOL						
Resources	Cost Element	Skill	Department	Curve	<i>Ouantity</i>	Units

WBS No:
Activity ID:1AAD
1AXXXD16A5Rockv Flats Closure Project
Baseline Cost and Basis of EstimateProject
WBS Filter
Activity FilterBaseline Devl
1AAD
**

			Baseline Cost an	id Basis of Estimate	Activity Filter	*	Starts In FY *
CON	CONTINGENCY	0000	NONE	ZDEPT No Department		Linear	465.516.30 Dollars
Factors	465516 Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT No Department		Linear	184.584.60 Dollars

Factors 184585 Dollars

Report Totals:

Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
1.140.787	25.901.523	94.243.937	39.485.045	159.630.505	8.838.493	168.468.997

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